JUL 13 1920
UNIV. OF MICH.

Volume XIV, No. 5 $1.00 a Copy, $5.00 a Year

The Journal of Abnormal Psychology

EDITOR
MORTON PRINCE, M. D., LL. D.
Tufts College Medical School

ASSISTANT EDITOR FOR BRITISH ISLES
ERNEST JONES, M. D., M. R. C. P.
London

ASSOCIATE EDITORS
E. E. SOUTHARD, M. D.
State Psychopathic Hospital, Boston
BORIS SIDIS, M. A., Ph. D., M. D.
Boston
AUGUST HOCH, M. D.
New York State Hospitals
CHARLES L. DANA, M. D.
Cornell University Medical School
WILLIAM McDOUGALL, M. B.
Oxford University
ADOLF MEYER, M. D.
Johns Hopkins University
J. RAMSAY HUNT, M. D.
Neurological Institute, New York

OFFICIAL ORGAN OF THE AMERICAN PSYCHOPATHOLOGICAL ASSOCIATION AND OF THE PSYCHO-MEDICAL SOCIETY (ENGLAND)

DECEMBER, 1919

ORIGINAL ARTICLES

Behavior and Experiment in Social Psychology 297
By Floyd H. Allport, Ph. D.
Are There Any Instincts? 307
By Knight Dunlap, Ph. D.
Babinski's Theory of Hysteria 312
By Morton Prince, M. D.
The Clinical Psychologist 325
By David Mitchell, Ph. D.
A Lecture on the Abuse of the Fear Instinct in Early Education . . 333
By Boris Sidis, Ph. D.
The Stammering Problem Solved 349
By Ernest Tompkins, M. E.
NOTES 353
REVIEWS
Experiments in Psychical Science (Crawford) 355
Modern Psychical Phenomena, Recent Researches and Speculation (Carrington) 361
Psychology from the Standpoint of a Behaviorist (Watson) . 363
Diagnostic Symptoms of Nervous Diseases (Hunt) 365
Religion and Sex (Cohen) 366

RICHARD G. BADGER, THE GORHAM PRESS, BOSTON
STANLEY PHILLIPS, 41 BRONDESBURY ROAD, LONDON, N. W., ENGLAND
British Agent for THE JOURNAL of ABNORMAL PSYCHOLOGY and book publications of RICHARD G. BADGER

THE JOURNAL OF ABNORMAL PSYCHOLOGY

EDITORIAL DEPARTMENT—CONTINUED

COLLABORATORS:

EDWARD W. TAYLOR, M. D.
Harvard Medical School

E. B. HOLT, PH. D.

A. A. BRILL, M. D.

GEO. V. N. DEARBORN, PH. D., M. D.
Cambridge

TRIGANT BURROW, PH. D., M. D.
Baltimore, Md.

MEYER SOLOMON, M. D.
Chicago

GEORGE A. WATERMAN, M. D.
Boston

ROBERT M. YERKES, PH. D.
Harvard Psychological Department

ISADOR H. CORIAT, M. D.
Boston

TOM A. WILLIAMS, M. D.
Washington, D. C.

LYDIARD HORTON

HERBERT S. LANGFELD, PH. D.
Harvard Psychological Department

All editorial communications should be sent to the editor 54 Devonshire street, Boston, Mass., or to Dr. Ernest Jones, 131 Harley St., London, W. I. All subscriptions and business communications should be sent to the publisher, 194 Boylston Street, Boston.

PINEWOOD REST
ARLINGTON HEIGHTS, MASS.

Treatment for Nervous Diseases, Rheumatism, Kidney, Diabetes Invalids and Chronic Cases.

For information or booklet, address
81 Appleton St., Arlington Heights, Mass.
Telephone 51340 Arlington
P. E. Dodan, M. D., Medical Director.

The Bancroft School
The Home School for Subnormal Children

One of the oldest, largest and best equipped private schools of its kind in existence.

For information address

The Bancroft School, Haddonfield, N. J.
E. A. Farrington, M. D. Jessie Coulson Cooley

TO OUR SUBSCRIBERS

THE JOURNAL OF ABNORMAL PSYCHOLOGY first appeared in April, 1906. A complete set forms a most valuable reference work.

If you require certain issues or volumes to make your file complete, write us for an estimate.

The Journal of Abnormal Psychology
194 Boylston Street Boston

THE JOURNAL OF
ABNORMAL PSYCHOLOGY

VOL. XIV DECEMBER, 1919 NUMBER 5

ORIGINAL ARTICLES

BEHAVIOR AND EXPERIMENT IN SOCIAL PSYCHOLOGY[1]

BY FLOYD H. ALLPORT

IN THE recent rapid expansion and progress of general psychology one field, it seems, has been sadly neglected and has been allowed to remain in a rationalistic and pre-experimental stage. This field is social psychology. Text-books still cling to the faculties of imitation, crowd consciousness, gregarious and other alleged social instincts. Even the great era of structuralism has left no worthy trace. In spite of florid accounts of mob mind, not one important piece of introspection has been produced to show the influence of the group upon individual consciousness. As for the services of behaviorism, there has been only a schematic notice of social conduct without a really genuine observation. True social psychology is a science of the future; its data are at present unrecorded.

It will be well to glance briefly at the factors which have impeded experiment in social science. The first of these we may term the "fallacy of the group." The group is not an elementary fact. Analysis must go beyond it to the behavior of the individuals of whom it is composed. Concepts, therefore, which denote characteristics only of groups are of little service. In the terminology, for example, of Professor Bentley, "congregate" signifies a body of persons physically associated, "assemblage" denotes a group with only a psychic bond, such as a community reading its morning news or a body of churchgoers anticipating the Sunday morning sermon. Aside from convenience such classifications do not seem to be vital, because as psy-

[1]Read before the American Psychological Association, Dec. 31, 1919.

Copyright 1920 by Richard G. Badger. All Rights Reserved.

chologists we are interested little in forms of social aggregation but much in the social behavior of the individual which underlies all aggregation.

Little more can be claimed for the neat phrase "polarization" used by Dr. Woolbert to characterize the unity of the attention of an audience to a speaker. Such a term forcibly restricts the sphere of the social influence. It also seizes upon the crowd as a whole, neglecting the important fact, to wit, the nature of the response in each individual. The crucial question would be: how does his response when the individual is in the group differ from that when he is alone? Is polarization merely the sum of individual responses, or are there inter-individual adjustments in progress?

The writers cited are merely examples. They by no means stand alone in the tendency of over-stressing the rôle of the group. To trace the fallacy further, one frequently encounters the statement that a crowd or mob under the sway of a leader is a unit. So it is. But this unity from the psychologist's standpoint is accidental. Similar reservoirs of energy have been tapped in the members of a crowd, and there is released a set of similar responses. The result is the appearance but not the reality of unity. The one-ness lies not in the response of individuals to one another, nor even in their participation in a common idea, but solely in their uniform response to the leader. We cannot accept the implication that each mind feels itself a part of one great whole, or that there is a depersonalization of self-consciousness and a rise of crowd-consciousness. The war has proved that the social psychology of the soldier must be studied, not in the crowd phenomena of company or regiment, but in the specific reactions and interactions of persons. Or again, in the present industrial conflict, it is of little value to speak of conflict between groups or classes, each polarized by imitation, suggestion and the like, and motivated by the instinct of pugnacity. True causes must be sought by the scientific method, that is by the scrutiny of individual cases in which direct or indirect social stimulation has produced definite responses.

We may conclude then that the greatest incubus in social psychology is the unwarranted emphasis placed upon the group. We have been so busy talking about group types, group interests, group consciousness, and degree of group solidarity, that we have forgotten that the locus of all psychology, individual or social, is in the neuromotor system of the individual. There can be no effect at large which is not exclusively an effect upon separate persons. To borrow the

phrasing of an old adage, if we take care of the individuals, the groups will take care of themselves.

Along with group psychology we must banish also categories of instincts which are supposed teleologically to equip the human being for the life adjustments of society. There may well be innate physiological patterns of response which in the interaction between organism and environment develop into perfected life-serving habits; and it is to be expected that these patterns, embodying fundamental drives, will come into play with objects of the social environment. But certainly in no further sense than this are we equipped at birth with mechanisms of social utility. For example, the self-preserving reactions exhibited in anger at the thwarting of bodily movements appear to be innate. They are in evidence very shortly after birth. The new-born infant however is equally angry or pugnacious whether it be a person or a blanket which confines his movements. The only reason why he later comes to use the fighting response toward persons and not toward things is because he has found by trial and error that such a response is effective only toward the former class of stimuli. In like manner self-assertion and self-abasement may be shown, if innate at all, to be instinctive only in physiological pattern and not in social significance. Alleged instincts of gregariousness and imitation are signal offenders in the ascription of nativity to the learned reactions resulting from the play of truly innate impulses upon objects of a social character.

Certain writers, in fact, following the lead of McDougall, have reflected no credit upon the latter by the employment of the psychologically monstrous term "social instincts." We must repeat that the word "social" has no significance except as denoting a certain type of environment and the part played by it in the post-natal behavior of the organism. Professor Dunlap has already pointed out the evil of mixing purpose with scientific explanation. The use of the term just mentioned seems to me a most flagrant injection of teleology into the developing germ cell. The innate equipment of the child, whatever it may be, is individual in every sense of the word; it is only the subsequently learned reactions which may be termed "social." From this we may deduce that for the data and laws of social psychology we must search primarily in other fields of behavior than that of instinctive response. What these fields may be will be discussed presently.

Even at the risk of commonplace we must insist that rationalism

can never take the place of observation and experiment. We must have the individual not in the background of our minds, but directly before us reacting to social stimuli. One observation of a baby's first laugh, or of the early use of language, is worth more than treatises on instinct and emotion. That idol of speculation lauded since Descartes, self-consciousness, must be worked out in terms of the behavior complex. It has been maintained that the consciousness of self, and its formation upon the experience of other selves, are of deep social import. This is seriously to be questioned. Consider, for example the cry of anger in the new-born infant, already mentioned. It is preeminently to such an organization of response that the term "self" should be applied. In actual life, whether individual or social, the *consciousness* of self is generally conspicuously absent. Indeed, to determine what causal relation it bears to social behavior is a problem for mystics. Self consists not in reflection but in adjustment of the organism to the inanimate and social sphere in which it moves.

After all this detraction it is incumbent upon us to suggest a program which shall keep social psychology abreast of the times. Shall we not say, then, that social psychology studies those responses of the individual which are conditioned in whole or in part by the social surroundings? The responses referred to fall under two heads: (1) those which are caused directly by social stimuli, and (2) those which are brought out by non-social stimuli, but are modified by the presence of accompanying social factors. At the outset the question arises whether any stimulation is wholly devoid of social aspects, and whether by consequence individual and social psychology can be separated. Professor G. H. Mead has pointed out that social stimuli are at least as early and as important as purely inanimate stimuli in the life of the organism, and that they condition meaning, thought and action throughout life. The interdependence of thought and language again reveals the inextricable social warp in the human fabric. Granting this, is it not therefore still more imperative to trace the developmental course of social behavior?

Genetic considerations aside, we can however discern a rough practical difference between social and non-social objects of stimulation. If I sit down to a meal in solitude, I respond to the food as a non-social stimulus. If however, I were a cat watching the movements of a mouse, of if I were perchance a cannibal cajolling my prospective dinner, then I would be reacting to a social stimulus. It is quite intentional that our two illustrations should rest upon the same under-

lying impulse, the obtaining of food; for social psychology, as stated before, deals not with instinctive drives, but with responses which, although perhaps based upon such drives, are called out selectively by a particular feature of the environment, namely the behavior of other individuals of our own or a similar species. The same innate impulse may initiate two activities which result in securing food; but one of them is material for social psychology while the other is not.

In the examples stated the response is direct; the behavior of one's fellow is the specific cause of the reaction. Suppose, however, I were eating at a dinner party. Then my response to the non-social stimulus (food) would be *modified* by the behavior of the others present. Such behavior may afford an incidental visual or auditory stimulation, or it may exist and be reacted to as a set of attitudes which I *believe* are assumed by my commensals. In any case a modification of conduct is produced by introducing social factors into the environment, and is measurable, as we shall show later, by experimental methods.

We may therefore define social stimulation as the stimulation resulting from the behavior of others which arouses a definite response. And we may recognize, without a claim to sharp distinction, the two types of whole and of partial causation in the response which the total situation evokes. It is my purpose briefly to develop the possibilities of these two types, and, in the case of the latter, to present a summary statement of experimental results already achieved.

To begin with the first, the direct response to social stimulation, we must descend in the animal series at least as low as the arthropods. Professor Hobhouse cites the observation of a hermit crab stalking an insect. The crab approached stealthily from behind, dropping down inconspicuously when his prey showed slight uneasiness or inclination to turn. Here is a case of fine adjustment of action which is not to be found in any of the reactions of the crab except those evoked by animate behavior. Its importance in connection with food-getting is apparent. Ants respond to stimuli from their fellows in very definite ways. There are movements and strokes of the antennae which elicit reactions respectively for food-seeking, for avoidance of danger, and for combat. It is in these specific interactions of lower animals, and not in their much discussed "societies" that we should seek the comparative data of social psychology.

Not only are definite movements and signs effective as social stimuli; we must admit also attitudes or motor settings toward acts or

gestures of a definite sort. The posture of the head, the tensing of certain muscles, the incipient frown or smile—these, as subtle forerunners of acts soon to ensue, acquire high value as social stimuli. Mammals and birds respond to such attitudes in their own kind or in human beings in characteristic ways. An intelligent cat will read and react to attitudes of fear, anger, or affection in a person to whom he is accustomed. Professor Mead aptly describes the shiftings and mutual adjustments at the opening of a dog fight as a "conversation of attitudes." Handicuffs of boys in play are of the same type. A blow somewhat smarter than usual may arouse a posture or expression of anger, and immediately before overt manifestation of the tendency, there is a response in the assumption of a like attitude by the playfellow.

Some remarkable cases of social behavior are to be observed in the food-getting activities of monkeys. Dr. Kempf reports a case of strategy in which monkey E used a misleading form of behavior in order to seize food from a wary monkey (D) who countered all other forms of approach by a wholesome suspicion. E would search about in the sawdust of the cage, apparently searching for food of his own, but cautiously glancing back over his shoulder and casually working his way backward as he searched until within grasping range of D's morsel of food. Other monkeys speedily learned to respond to E's strategic behavior; but D, who was evidently a socially stupid monkey, never made the adjustment.

Efficient behavior of this sort is the more remarkable in contrast with the apparent lack of reasoning power in the conduct of monkeys in puzzle boxes, and in imitation experiments. Practically all cases reported show that their method is the primitive one of trial and error in manipulation; and only a few investigators have found evidence of grasping a solution by observing the experimenter's movements. On the other hand, in the behavior of E, there appears a re-grouping and apparently a new integration of simple habits, such as scratching for food, shuffling about, and grasping, which are remarkably well adapted to the solution of a complex problem. Although Dr. Kempf could not ascertain the origin of this trick, it was doubtless either self-originated or learned from another monkey. In either case we find that when the elementary habits of non-social response can be made to serve biological ends as social stimuli, they are organized into complexes for producing reactions in others in a manner closely rivalling the adaptability of human beings.

Many of the earliest adjustments of the infant also are social in character. Actuated by hunger or other basic impulses, babies show a facility in being stimulated by maternal behavior to definite modes of response which far outstrips their adjustments to inanimate objects. At a later age gestures, facial expressions, and words, if connected with infantile interests, enter with astonishing readiness into the action system of the child. How quickly he learns to respond to signs of commendation, disapproval, playfulness, and prohibition! We should recall also in this connection the case of Clever Hans and the social brilliance displayed by so comparatively stupid a species as the horse in responding to scarcely discernable cues of movement afforded unwittingly by spectators.

Facts such as we have been discussing prove that educability through social interaction is earlier and finer than through experience with non-social objects. When stimulus and response are social, the adaption to new and diverse situations is surprising. If we consider intelligence to be the measure of adaptability to new and difficult, but crucial, situations, may we not then attribute to an animal or person a *social intelligence* far in advance of his intelligence in dealing with the world in general?

This viewpoint must be presented with a word of caution. It is not meant that in social intelligence we find nervous or mental operations of a character different from those employed in adaptations of a non-social sort. It must be agreed that the baby learns to respond to the soothing tones of the mother in the same way that a dog learns to associate the sound of a tuning fork with his food. I desire to affirm merely that social stimuli are prepotent at an early age and throughout life, and that they therefore in large measure make possible that life adaptation which we call intelligence.

The social phenomena we have been discussing, namely those directly evoked by the behavior of a member of the same or a related species, can be investigated in at least two ways. The first is by the observation of their genesis in children, and the determination of the first forms of reaction to behavior and the building up of complex social adjustments on the basis of increasingly complex social stimuli, such as movement, expression, attitude, gesture, and sound. The second comprises the experimental study of the individual's reaction to social attitudes, emotional expressions, pantomine and conversation. The field to be sure is vast and the settings difficult of control; but the returns will be commensurate value.

In most summary manner allow me now to refer to the possibiltiies of the second class of the data of social psychology. In this case a response which is made primarily to a non-social stimulus is influenced by social factors present in the situation. In this category belong the influences brought to bear upon individual behavior by the presence of co-actors in the shop, the workroom, the school, the office, the library, the trade union, the club, and the professional organization. It is the condition also which obtains in the audience or congregation, in public assemblies, and in the crowd and mob. In all these situations the individual reacts directly not to the behavior of the other individuals, but to some stimulus wholly or mainly non-social, such as a task, a book, a lecture, a set of rules, a political speech, or a riot. He is however influenced in that reaction by the overt or implicit evidence of the behavior of the others toward the same object or toward him. In a crowd or audience one finds an inseparable complex of social stimulations of both the direct and the contributory sort.

The fundamental tendencies of incidental social influence are readily open to experimental investigation. It is necessary only to arrange tasks or experiences to be performed or undergone during one set of trials by a number of subjects working together, and in another set by the same subjects working alone. In this way the nature and quantity of social influences upon individual response may be determined. Prior to 1915 practically all research on this problem had been done in Germany by August Mayer, Meumann, Moede, and others. The purpose was not primarily social but to determine the merit of work done by children in school compared with the work done at home, or in seclusion. A short summary of these results may be found in an article by Professor Burnham in Science, N. S. 1910, Vol. 31. Mention should also be made of the excellent experiments on social influence by Dr. H. T. Moore and by Dr. A. P. Weiss, already reported at these meetings.

During the last few years I have conducted a series of experiments in the Harvard Laboratory along similar lines. The subjects were adults, and the tests and experiences included multiplying, cancellation, a reversible perspective test of attention, free chain association, thought process in the form of written argument, estimations of weights and of the pleasantness of odors, and emotional influences. The results corroborated those of earlier investigators in the occurrence in the group of a more vigorous exertion of attention and an increased output of mental work in attention tests, multiplying, writ-

ing associations, and producing arguments, than occurred when the subjects worked singly. There was a tendency also for the superior individuals to be less favorably influenced than the inferior by the stimulus of the co-workers.

In the association tests there was a decrease in the number of associations of the personal, or ego-centric sort written in the group condition, together with a more frequent reference to objects in the immediate physical and social environment. Whether this fact indicates again a response in the nature of a social attitude is not certain, but it is a suggestive possibility.

One of the most interesting results was brought out in the social influence upon judgments. Both affective judgments (i. e. the estimation of odors) and non-affective, such as weight estimation, were characterized in the group by an avoidance of extremes, both high and low. Extremes of a graded series were estimated more conservatively in the group than when judging alone. The explanation that this fact results merely from distraction is disproved by the further result that in the case of weights, where precision could be determined, the judgments were equally accurate together and alone. Here again there appears an attitude or tendency to response characteristic of behavior influenced by concurrent social stimuli. The precise cause of this attitude of social conservatism, and its genesis and individual variation, are probably significant problems in the field of direct response to social stimuli.[2]

The experiments which have been described deserve attention mainly as pioneer ventures into a field which by reason of its daily familiarity in human experience has been too much taken for granted and too little explored or understood. Many more experiments are required in which the type of common task or experience and the number, character, and mutual relations of the individual subjects can be instructively varied. In summary, the time has come to abandon speculations about types of groups, social organization, self and crowd consciousness, instinct and imitation. When social psychologists focus their attention upon the behavior of the individual under direct and incidental stimulation from the behavior of others, then the most vital questions of the social order will find their solution.

[2]The results of these experiments are soon to be published in detail as a series of articles under the general head: "The Influence of the Group."

BIBLIOGRAPHICAL REFERENCES

BENTLEY, M. "A Preface to Social Psychology."
Univ. Illinois Studies in Psychol. Monog.
1916. Vol. 21. (No. 92) 1-25.

BURNHAM, W. H. "The Group as a Stimulus to Mental Activity."
Science N. S. 1910. Vol. 31, 761-767.

KEMPF, E. J. "Did Consciousness of Self Play a Part in the Behavior of this Monkey?"
Journ. Philos. Psychol. and Sci. Methods.
1916 No. 15 (Vol. XIII) 410-412.

MCDOUGALL, WM. "Social Psychology."
John W. Luce and Co., Boston, 1911.

MEAD, G. H. "Social Psychology as Counterpart to Physiological Psychology."
Psychol. Bull. Dec., 1909, Vol. 6.

———. "The Psychology of Social Consciousness Implied in Instruction."
Science N. S. 1910. Vol. 31. 688-693.

———. "What Social Objects Must Psychology Presuppose?"
Journ. Phil. Psychol. and Sci. Methods.
1910. Vol. 7. 174-180.

———. "Social Consciousness and the Consciousness of Meaning."
Psychol. Bull. 1910, Vol. 7. 397-405.

———. "The Mechanism of Social Consciousness."
Journ. Phil. Psychol. and Sci. Methods. 1912. Vol. 9, 401-406.

WATSON, J. B. "Psychology: from the Standpoint of a Behaviorist."
Lippincott, Phila. 1919.

WOOLBRET, C. H. "The Audience."
Univ. of Ill. Studies in the Psychol. Monog. 1916. Vol. 21. (No. 92).

ARE THERE ANY INSTINCTS?[1]

BY KNIGHT DUNLAP

THE JOHNS HOPKINS UNIVERSITY

THE conception of instinctive activities is a fairly definite one in general psychology, and we may without hesitation accept it as it is generally understood; namely, as designating any responses which have not been learned.

The conception of *an instinct,* or of *instincts* is however a very confused one, and recent texts show great vacillation in the application of the term. Some authors apply the term to what Warren in his recent classification[2] lists as *instincts,* and also to what Warren lists as *reflexes.* Some authors restrict the term to groups of activities which are unconscious: others insist on consciousness as one of the specific differentia of "instinct." In most cases, it is assumed that "instinct" does not involve volition: but I do not think all authors would agree to this restriction. I refrain from introducting pertinent illustrations solely because I do not wish it supposed that I have more pointed objections to certain methods of treatment than I have to a great many others.

The greatest confusion of all results from the failure to distinguish between the instinct as a group of activities *teleologically* defined, and the instinct as a *physiological* group. It makes considerable difference whether, for example, we consider the "feeding instinct," as made up of the activities which result in food being secured; or consider it as a certain physiological group of activities which we may name from its most characteristic result, but which is defined by its actual reaction characters, and in that way distinguished from other physiological groups.

The confusion may perhaps not be an important matter for general psychology in its present state of development. Certainly, the presence of the confusion in some general texts seems to have no particular bearing on the further work in these texts. In social psychology however, the term is capable of great abuse, and is decidedly dangerous unless applied in a carefully considered and standardized

[1]A paper presented before the American Psychological Association, Cambridge, Mass., Dec. 29, 1919.

[2]Psychological Review, 1919, Vol. 26, pp. 197-203.

way; and it is from the point of view of social psychology that I am here approaching the topic. I am not concerned for the present as to whether the "instinct," as defined, shall turn out to be conscious or unconscious; or whether if conscious, it is volitional or non-volitional: I am concerned simply with the question of the definition itself; whether it is to be teleological or physiological.

The term "instinct" might be applied consistently, as it is applied at times, to a certain definite group of muscular and glandular performances—a form of behavior, in one of the various meanings of the elusive term "behavior"—resulting from a definite stimulus or complex of stimuli. The concatenated movements of the muscles of the face, throat, and viscera, with attendant glandular changes, which make up the sucking reaction of the infant: or the disposition to make these movements upon certain stimuli: might very well be designated as "instinct," regardless of whether consciousness or volition is involved, and quite apart from the fact that the reaction may be useful. That there are "instincts" in this physiological sense of the term, I suppose no one could deny: certainly I shall not deny it. But it is very difficult to adhere to this meaning of the term, if we may judge by the procedure of the various authors who deal with the topic, and I am very strongly convinced that it is not at present possible to secure agreement to confine the term to this meaning.

At any rate, I propose to join in the neglect of the physiological use of the term, and formulate the inquiry to ask whether there are "instincts" in the teleological sense—the sense in which the term is used in McDougall's *Social Psychology*.

In the teleological use of the term, as I have already indicated, the activities are grouped and classified in accordance with the results obtained in the outer world, physiological and psychological groupings being largely neglected, and where introduced, being always subsidiary to the teleological groupings. Thus; the "instinct of flight" includes all those activities which result in a get-away from a dangerous locality: the "instinct of repulsion," all those activities which remove something from the animal's environment: the "instinct of curiosity" includes the activities leading to examination: "pugnacity" includes the movements which eventuate in combat: the "parental instinct" is the sum of the activities which result in the care and protection of the child: the "instinct of reproduction" includes those activities which result in the propagation of the species: The "gregarious instinct" is the composite of activities which result in forming a herd and

holding it together, and so on through the list. (Of course I mean that the tendency to these activities constitute the "instincts," but the shorter expressions are not misleading).

This teleological grouping of activities under the concept of "instinct," so forcibly represented by McDougall, is apparently widely accepted, and so thoroughly fixed that there is little possibility of using the term in any other way. In discussing the question whether or not there is an "instinct," as a usefully discriminable entity, we are therefore not denying the physiological grouping previously mentioned. Nor are we denying the possibility of a psychological grouping: such may be discoverable, although no one has so far made any serious search for it. New terms will have to be found for these groupings.

The grouping of activities into "instincts" may be admitted to be a useful procedure, if it be clearly understood to be a device of convenience only, similar to the arrangement of documents in a well ordered filing system. Just as there may be different filing systems for different purposes, so different classifications of "instincts" are useful, if they are not misunderstood as being anything more. We may classify "instincts" under two, four, twenty, or a thousand headings, according to the particular purposes we have in view, and may then use another classification for another purpose.

The constant tendency in social psychology is to consider these convenient groupings, arbitrarily made, as if they were series of natural and generic distributions on the psychological level, and to deduce a set of important deductions from the classification adopted. Having posited a "pugnacious instinct," for example, one writer proceeds gravely to infer that war is forever a necessity, as the expression of this "instinct." Controversy over the hypothetical "moral instinct" is another illustration of confused procedure. As a matter of fact, there is or is not a "moral instinct," according to the plan of the author. If it is deemed useful to segregate, in the outer world, certain effects which are to be named "moral"—and this segregation can unquestionably be made—any unlearned tendencies which contribute to these effects, legitimately make up a "moral instinct." If the classification of effects as "moral" is not chosen, then of course there is, for the author choosing, no "moral instinct." Again; if it is advisable to distinguish between the mere process of copulation and the processes of conception and birth, there is an "amatory instinct," distinguishable from the "reproductive:" otherwise there is not.

The impossibility of considering the teleological classification of

"instincts" as more than a matter of convenience, is shown by the overlapping of the "instincts." Even the teleologists point out that "pugnacity" arises from other "instincts." As a matter of fact, there are very few actual responses of the animal which do not form part of a number of "instincts," whatever the system of classification. The same physiological activities, and in part the same conscious processes, are involved, in primitive man, in pursuing a deer for food, and in pursuing a female for amatory purposes. In other cases the same reactions may now be classed as mere "flight," now as manifestations of "gregariousness," now as manifestations of "self abasement." The same fears and perhaps the same desires may be involved in several cases.

I am sure that all the activities, physiological and psychological, of which the animal is capable, participate at some time or other in the expression of the "reproductive instinct." By taking the teleological "instinct" as if it were a psychological or physiological entity, the Freudians accordingly arrive at the grand conclusion that there is nothing in the animal world but "sex instinct." The reactions shown by a child may later be utilized by the "sex instinct." Hence, it is assumed that in its first appearance, the reaction is "sexual." In stating that serious results flow from the confusion of the teleological and the psychological points of view I am not theorizing, but referring to plain and deplorable matters of fact.

The present tendency to develop social psychology on the basis of a classification of "instincts" results in as many kinds of social psychology as there are classifications: and the possible number is legion. By assuming that some preferred classification represents an ultimate list of essentially different units, a psychologist is enablel to develop a system which is in reality nothing but a logical deduction from the assumptions made in the list adopted. Each system may be as logically perfect as any other. In the same way, Euclidean geometry, hyperbolic geometry, and parabolic geometry, each legitimate and exclusive of the other, are built up, each on its definite postulates. As an illustration of this sort of construction in social psychology we may compare Trotter's *Instincts of the Herd in Peace and War* with McDougall's *Social Psychology,* and with the Freudian system. One might go further, and consider the less sharply drawn systems resulting from the assumption of moral and religious "instincts." If an "instinct to imitate" be assumed, still different systems result.

The consequences of carrying over to psychology the teleological

conception of "instincts" are much complicated by further assumptions concerning the role of consciousness, and of volition. We might examine the deplorable consequences of this complication in child psychology, where, if possible, the confusion is even worse than in social psychology: but it is better to deal with the more fundamental fallacy, and settle it in such a way as to abort the fallacies based upon it.

With teleology as a method, we need have no quarrel, and we should not lightly underestimate its importance. Perhaps it may be of far greater value than psychology. Perhaps there is no such a thing as social psychology. But if so, let us call the topic by some other name, and cease to delude ourselves into accepting it as psychology. Personally, I am inclined to favor the belief that a social psychology may be developed. In such a science, teleological methods may legitimately be employed, if properly labeled, just as physiological methods may be. One must however beware of a teleology masquerading as psychology, even though it utilizes a great deal of psychological material, and employs some psychological methods.

Accepting the term "instinct" in the sense in which it is most emphatically used at the present time, we must conclude that for psychology there are no "instincts." There is a great deal of *instinctive activity,* both conscious and unconscious, and probably both volitional and non-volitional: instinctive perceptions and thoughts no less than instinctive acts and emotions. These activities may well be considered in their physiological groupings, and possibly in their psychological groupings, if such groupings are discoverable. I am at present inclined to think that the possibility of discovering social psychology rests upon the possibility of discovering psychological groupings of instinctive activity: and neither of these discoveries is likely to be made until we cease talking of "instincts."[3]

[3]There is of course no objection to the use of the term *instinct* in the general sense, just as we use the general term *intelligence.* The objection is to using the expressions *an instinct* or *instincts* to indicate anything except a classification for purposes of convenience, or else in a distinctly teleological sense.

BABINSKI'S THEORY OF HYSTERIA[1]

BY MORTON PRINCE, M. D.

OF RECENT years, and particularly as a result of the experience in this war, there has developed amongst French neurologists, under the teachings of Babinski, a reaction against the classical conception of hysteria of Charcot and his school. This present tendency, or rather the present concept which is in vogue, is to regard the classical symptoms such as paralysis, anaesthesias, convulsive seizures, etc., as artificially manufactured by the physician or the environment through the influence of suggestion and not as essential manifestations. In this view these manufactured symptoms are identified with hysteria and consequently hysteria becomes nothing more nor less than a group of suggested symptoms. It is claimed, that under the influence of this point of view and clinical method of approach, hysterical manifestations are much less common than formerly in neurological wards, and that during the long continued neurological experience of this war this particular kind of war psychosis, or so-called shell shock, was finally largely controlled and diminished in frequency. I think, also, it is true that this conception of hysteria towards the end of the war largely permeated English thought and dominated the point of view of English neurologists who were engaged in the treatment of war psychoses. This reaction, as I have said, has been due to the teachings of Babinski, who for many years has insisted that hysteria is nothing but the product of suggestion, and therefore an artificial psychosis. I propose to examine Babinski's thesis and the evidence upon which he relies for his inductions.

Babinski[2] begins by dividing the phenomena of hysteria into two groups: First, those "accidents" which have "the common characteristics of being capable of being reproduced experimentally by suggestion" which he avers is "capable of determining the form, the intensity and the duration of them." And, correspondingly, they can be made to disappear by the influence of persuasion or suggestion.

---

[1]Read at the Meeting of the Boston Society of Psychiatry and Neurology, December 18, 1919.

[2]Hystérie—Pithiatisme et Troubles Nerveux D'Ordre Réflexe En Neurologie De Guerre. Par J. Babinske et J. Froment. Mason et Cie, Paris, 1917.

In these accidents or symptoms are included convulsive attacks, paralysis, various contractures, tremors, choreic movements, sometimes irregular but generally rythmic, troubles of phonation, of respiration, of sensibility (anesthesias, hyperesthesias) and sensorial troubles.

In passing let me say that while *experimental* suggestion is capable of reproducing these phenomena it is doubtful if they can be so reproduced in their complete form in a normal individual, and particularly in their *intensity* and *duration,* excepting in a subject already subject to them. Anesthesia, contractures, and paralysis, for instance can be induced in a normal susceptible person by hypnotic suggestion, but such suggested phenomena spontaneously and very quickly disappear when the person is left without attention. They may be said to be normal phenomena. Given, however, a person already affected with the hysterical *state,* such phenomena with the characteristics of intensity and permanency peculiar to hysteria can be induced by direct or indirect suggestion, and, if they have been recovered from, may be reinduced. They are not normal phenomena. The reason for this difference should be clear with an understanding of the hysterical state.

In the second group he places those phenomena which are uninfluenced by suggestion. In this group are included, on the one hand, dermographism (which he attributes to an exaggeration of the cutaneous vasomotor reflexes) and, on the other, abnormally intense and prolonged emotional reactions: namely, tachycardia, erythema, hypersecretion of the sweat and intestinal glands.

The phenomena of this group can be artificially and experimentally reproduced only indirectly by the intermediary of emotion which suggestion can excite. For, once thus indirectly excited, these cease to be under the influence of suggestion which "is incapable of determining their form, intensity and duration." They are the physiological manifestations of emotion. He fails, however, to recognize all the manifestations of emotion.

The second group, therefore, must be completely differentiated and each must receive a different and appropriate name. To the first group he would limit the term "hysteria," if used at all. To the second group he would give the names dermographism, vasomotor troubles, or troubles of vasomotor reflectivity, emotional troubles or troubles of emotivity.

In passing I would say that in one sense these are not troubles at all but only normal manifestations of the emotional hysterical state

of mind. It is the emotion which is pathological in its intensity and permanency, as is evidenced in the phobias, and depends upon the formation of systems or complexes of painful ideas, sentiments and emotions organized by particular experiences of the individual. Emotion, or rather emotional ideas are very commonly a factor in all hysterical states.

Perhaps I may be permitted to recall that many years ago[3] I called attention to the fact that these and other symptoms so commonly met with in hysteria and the functional psychoses and neuroses are only manifestations of emotion. So there is nothing particularly novel in segregating symptoms of this class from those of the hysterical state proper.

From his point of view Babinski would abandon the name of hysteria and replace it with the term pithiatism, from πειθώ, I persuade, and ἰατός, curable, which expresses, in his view, one of the fundamental characters of these "accidents," viz: possibility of curing them through persuasion.

Now let us see what trouble Babinski lays up for himself, and is bound to fall into, from this point of view. Recognizing the failure of the older writers to formulate a definition of hysteria, he feels satisfied with the following which he gives:

> Hysteria is a *pathological* state manifesting itself through troubles which it is possible to reproduce by suggestion in certain subjects with a perfect exactness and which are susceptible of disappearing under the influence of persuasion (contra suggestion) alone.

In passing he meets the criticism, that peruasion or contra-suggestion is capable of curing neuropathic troubles that are not hysterical and in particular neurasthenic symptoms, by asserting that there is common agreement that fatigue phenomena, essential characteristics of neurasthenia, are not susceptible of being cured by contra-suggestion alone. The symptoms that can be made to disappear by this method are only hysterical accidents (pithiatic) engrafted upon neurasthenia. That he does not meet this criticism adequately I will later point out, for it is common experience with those who have made a thorough and profound study of hysteria and neurasthenia that fatigue symptoms, even in cases where there are no so-called classical symptoms of hysteria, can be made in certain cases to disappear in the twinkling of an eye by suggestion. In other words, there is a form of

[3] Fear Neurosis; *Boston Medical and Surgical Journal, December 22, 1898.* The Unconscious, 1914, p. 441.

so-called "neurasthenia" which is purely expressive of the "hysterical state." It is one of the "accidents."

To return now to Babinski's definition of hysteria, I would emphasize the fact that he defines it as a *"pathological state"* of which the so-called troubles are only manifestations. This idea of the pathological state—a sound one—should be constantly kept in mind in following Babinski in the development of his argument. For, strange as it may be, after the formulation of this definition, we hear nothing more of the pathological state but only an elaborate and clever exposition of its manifestations. This failure to keep in mind, on the part of Babinski, the conception of the pathological state, is the weak point in the edifice which he builds up. Dwelling only on symptoms he fails to grasp the essential problem of hysteria, losing sight of the pathological state and its psycho-genesis which should be the sought for goal or solution. He confines himself to certain physiological phenomena and loses sight of the fact that many of the so-called troubles which are the manifestations of the "hysterical state" are pure mental stigmata. These are not included in his first group of pithiatic symptoms, i. e. are not recognized as hysterical, though they can be induced in favorable subjects by suggestion. Necessarily, therefore, he fails to recognize that many of the cases which he makes use of to support his thesis were already in the "hysterical state" and manifested classical manifestations of hysteria. These cases that had been exposed to emotional trauma, he assumes were free from hysteria until they were later the victims of suggestion. The consequence of this lack of vision is that when he comes to his data, to the cases which he cites to show that hysteria is not induced by emotion but only by suggestion, he naively describes cases which every clinician ought to recognize had already developed hysteria and already exhibited classical hysterical symptoms of a mental sort induced by emotional trauma, or mental stress and strain before suggestion, even in his own opinion, had got in its work. (I do not say that these mental symptoms are not capable of being induced by suggestion quite as much as the neurological troubles—indeed they are. I raise the point to show the limitation of Babinski's vision and his failure to grasp the hysterical "pathological state.")

Now let us assume simply as a working hypothesis that the "pathological state" of hysteria, however brought about, is a functional dissociation (or disintegration, or inhibition, or repression) of one or more of the normally integrated psycho-neurological systems, mani-

festing itself by loss of certain mental and neurological functions on the one hand, and the activity of certain other functioning systems on the other. This abnormal activity would express itself, because of the disintegration, in uncontrolled response to excitation (from within or without), commonly designated as automatisms. And let us assume that this abnormal activity may be manifested by either the remaining associated systems or by the disintegrated cast off systems. Such a condition, which it is generally agreed, I think, can be reproduced artificially by suggestion in hypnosis, always exhibits increased suggestibility as is the case in hysteria.

As examples of the loss of function in the *mental sphere* from such a dissociated state may be taken: the amnesias, confusional states, bewilderment, "twilight" states, sleep (normal or pathological) unconsciousness, aboulia, deafness, dumbness, blindness, the multiple or dissociated personalities, etc. In the *neurological sphere* we have: the paralyses, the anethesias, the astasia-abasias, etc.

As examples in the mental sphere of the activity, or automatism, incident to the disintegrated psycho-neurological systems may be cited: the hallucinations, the deliria, the fixed ideas, the emotional mental states, etc. In the neurological sphere: the contractures, tics, spasms, tremors, convulsions, ambulations, etc.

The combinations of these two forms of troubles of the mental sphere give various clinical pictures, such as alterations of character, fugues, somnambulisms and the different well known types, some of which have been made classical by Charcot. Mind you I am not now concerned with the genesis of the pathological state, or its symptoms, but only with the concept of the state and its *relation* to its manifestations.

Now, having formulated this conception of the pathological state let us keep it in view as a working hypothesis while we follow Babinski in his exposition, bearing in mind that he apparently has no conception whatever of this "pathological state" and gives us no idea of what his mystical "state" may be. We are therefore permitted to suspect that he does not conceive of any state aside from the suggested symptoms. Suggested symptoms are for him hysteria.

The corner stone of Babinski's thesis, then, is that the hysterical accidents (pithiatism), very limited according to his conception as we have seen, are always the result of suggestion—auto-suggestion or hetero-suggestion. By hetero-suggestion he very properly includes the unguarded solicitude of those about the patient, contagion from

hysterics, and the medical examinations with their impressive apparatus well adapted to awaken the attention of the patient and to guide his imagination in directions often unforeseen.

As possible factors of auto-suggestion, it is true, he recognizes "the meditations of the subject," and "all his previous experiences and beliefs," but, so far as I am able to extract his meaning from the vague generalizations in which he explains himself, the active factor is a very specific *idea* on the part of the subject of a pathological symptom (e. g. anesthesia or paralysis), one that wills (or suggests) the hysterical "troubles." "The hysteric," he explains after drawing a similarity with a voluntary act, "seizes the idea of a pathological state [symptom?] and makes it a reality when that idea is forced upon him by its systematized affective elements [emotion]: that is to say when it awakens in the patient a desire for certain advantages, or obsessing anxieties (*inquiĕtudes*), or an abnormal need to astonish, to attract attention, in a word the infinitely varied motives which can induce the facile will to influence these subjects." In short the subject, governed by a variety of motives, simply *wills* the pathological syndrome and thereby becomes an hysteric.

This is delightfully simple, but I fear that mental mechanisms are much more complicated, involve many factors, and are much more difficult to analyze and solve.

That hysterical troubles are induced by psychological factors nobody, I think, nowadays questions. And that at times the exciting factor may be an immediate, direct suggestion—auto or hetero—or an act of will, conscious or subconscious, cannot be doubted in view of the numerous data at our disposal. But it is probably always conditioned by coöperating factors. Yet, even so, that this is always or generally the mechanism is another matter and one, I think, which cannot be accepted by students versed in the pathology of hysteria. The matter is not so simple as that.

I have no cause to quarrel with Babinski for insisting that hysterical *phenomena* can be suggested. Every neurologist has seen often enough examples of this in his practice and indeed is aware that he himself has suggested such phenomena, intentially or unintentionally. Nor can any one doubt that a large proportion of hysterical stigmata, particularly those following traumatisms, have been so suggested, generally unconsciously, by the examining physician. But that all have been so suggested, or what proportion have been so suggested, is another question. Given a certain abnormal state of mind, symp-

toms can be manufactured almost ad libitum. In such a state the symptoms can be educated, just as by re-education they can be made to disappear.

But what is the state of mind? That is the problem. I defy any one to take any man in the street and by suggestion to create hysterical stigmata, or even to take a patient with organic nervous disease, such as tabes, or multiple neuritis, or a cerebral lesion, and create a hemi-anesthesia, or hemiplegia, or dumbness or deafness. You may, to be sure, hypnotize such a person and in the state of hypnosis suggest such stigmata. But now you are dealing with an artificially induced abnormal state of mind. We examine cases of organic disease, of multiple neuritis, and brain tumor and cancer of the liver with impunity, without fear of creating anaesthesia or limitation of the field of vision or paralysis. Why is this? And we place patients in the same ward and in adjoining beds with hysterical cases and they do not contract hysterical symptoms, though other so-called hysterical individuals may. Why is this? If the thesis were that the dissociated state of hypnosis may be identified in principle with hysteria, it would be much sounder.

What is the difference between the normal mental state of the man in the street and that of the person who has undergone some sort of psychological conflict, or trauma, or "shock" (whether from external or from internal forces), that the one is practically immune to hysterical stigmata by suggestion, and the other permits them to be created with ease? This is the crux of the problem.

When it comes to the sources and influences of auto-suggestion, no one will doubt that the "meditations of the subjects" and "all his previous experiences and his beliefs" play an important part as psychological factors in inducing hysterical troubles and particularly the hysterical state, but not in the way that Babinski supposes. According to my interpretation they form "settings," i. e., these experiences, etc., give meaning to ideas, create points of view, "sentiments" and attitudes of mind, and through the impulsive force of their emotions create conflicts between systems, or induce defense reactions that result in disintegration of the integrated psycho-neurological systems and automatisms. The mental conflicts, for instance, may result, through repression, by the force of one of the belligerent factors in dissociation of systems in the psychological or physiological spheres, and this dissociation may rob the personality of various functions organized or integrated within the given dissociated psycho-physio-

logical system. Or a conflict may create subconscious systems that express themselves in automatisms (tics, spasms, etc.). To interpret such a complex mechanism as suggestion is stretching the use of the word and giving it a meaning far beyond that of common usage. Every one will admit that anesthesia or paralysis, for example, is a dissociation of the psycho-sensory system or the psycho-motor system, respectively. Whether it be effected by external suggestion or by internal forces, the fundamental underlying pathological state is dissociation.

But granting that the pathological state as well as the hysterical symptoms may be induced by suggestion alone, and that the complicated process involved may be comprehended under or excited by suggestion, this is not the real fundamental point in Babinski's theory. The fundamental contention is that in all cases suggestion is the causal agency, and that there is no other known agent, including particularly emotion, that can induce the symptoms.

The question is whether the dissociation, as a matter of fact, can *only* occur by the force of a direct suggestion (or act of will), or whether it may be the result of other forces, such as the discharge of an emotion (with an involvement of the system at issue in a wider disintegration); or, by the repressing, or inhibiting force of other psychological factors involving a complicated internal mechanism, etc. The capability of an emotional discharge to induce hysterical trouble is an important one to which Babinski has directed much attention, but only from the point of view of symptoms. It will be necessary to consider the question at length. But first I want to discuss the question whether such dissociations as anesthesia, paralysis, etc., can only occur as the result of a direct suggestion or a volition-idea.

We have various data at our disposal which allow an answer, and indeed many of these demonstrate that dissociation, particularly as the result or a form of inhibition, is a factor in the normal mechanism of mental and physiological functions. Without a mechanism permitting of inhibition and dissociation, normal mentation and neurological activity, such as the spinal reflexes, would be impossible. But, leaving that larger aspect of the question aside, I would point out that when a person, in a state of absent-mindedness, or in a "brown-study," or whose attention is deeply engrossed in reading, does not feel a fly crawling on his skin, or hear the ringing of a bell, or a passing street car, he exhibits dissociation of the psycho-sensory field, or, in other words, an anesthesia analogous to that manifested by hysterics.

Again, a subject who is performing automatic writing will be often found to have anesthesia of the writing hand. The dissociation of the motor system has robbed the personality of the associated (integrated) sensory field. In neither of these two examples can there be any question of the sensory dissociation having been produced by suggestion, if the word be used in its proper sense. The dissociation with the resulting anesthesia is brought about indirectly. Again, the functional amnesias are the result of dissociation, as can be easily proved experimentally and therapeutically, and yet they frequently follow immediately traumatism at the moment when the subject regains consciousness. In such cases they cannot be attributed to suggestion any more than when they develop in cases of multiple personality, with which every one ought to be familiar.

Amnesia in its various forms—retrograde, anterograde, etc.,—is one of the classical symptoms of hysteria. Immediately following a so-called "shock" it is a most common occurrence, and even frequently it is observed under circumstances which give the appearance of spontaneity, as in sudden fugues or somnambulisms. In the former case ingenuity is strained to the limit to find an auto or external suggestion; and in the latter, while we must assume a psychological cause, such as a mental conflict, anything like conscious "willing" the amnesia is too far fetched to be worthy of consideration.

I saw a case of so-called "shell shock" which was exhibited to me in a war hospital as a case of insanity. It was easy to demonstrate to the physician in charge that it was in reality a case of anterograde amnesia. Surely this was not suggested by the physician who mistook the real character of the symptoms, and are we to suppose that the affected soldier consciously imagined and willed a symptom of so strange a kind?

Then again, what are we to say of the phenomena observed in multiple or dissociated personality? Every one familiar with these phenomena recognizes that they are merely types of hysteria and knows that different phases of personality may exhibit bizarre stigmata which demand extreme credulity for the belief that they are the product of either auto or external suggestion. One case of my own, for instance manifested in one phase a remarkable form of complete anesthesia which I had never heard of before and which it is difficult to believe the patient had ever conceived of. It was discovered by chance. The patient was found to have lost every bodily sensation, so that, as she described it, she felt that she was "just mind without

a body." She not only did not feel touch, or pain, or muscular sensations, but did not know whether her limbs were passively raised or lowered; whether she herself moved them or not, as she readily did; whether she gesticulated, as she did; whether she smiled or frowned; or whether she stood up or sat down, or what her position in space was. In one phase of another case, the subject was completely anesthetic to touch and pain, unless vision could be employed conjointly with the tactile sense.

In some recorded cases the subject in one phase exhibited one form of paralysis, etc.; in another phase, a different form, in still another no paralysis at all, and similarly with other stigmata. Such cases are known to have exhibited such "troubles" immediately following "shock" without the intervention of a stage of "meditation." The personality seems to fall to pieces by magic, as in transformation scenes on the stage where a blow, or a signal transforms lovely youth into shrivelled old age, or a rock into a splendid chariot.

When alterations of personality are induced by hypnosis even then we may not be able to foretell what stigmata the new phase of personality may manifest, and different stages of hypnosis may exhibit different psychological and physiological defects without our being able to forecast them. Auto-suggestion, it may be said, is the causal agent. But the phenomena are too bizarre for even the wildest imagination to conceive.

I am citing these phenomena and the conditions under which they occur, not to maintain that hysterical troubles cannot be induced by suggestion, but rather to show that they can be induced by other causative agents and mechanisms.

In discussing the pathology of hysteria I might go on indefinitely quoting other hysterical phenomena and the conditions under which they are observed, showing that the former are capable of being induced by other forces than pure suggestion. It must be obvious that whether or not a given hysterical symptom has been induced by suggestion is a matter of fact and not one of principle and must be determined in each and every case.

Babinski's basic principle is that "emotion alone is not capable of inducing hysterical accidents," indeed that "when the human soul is shaken by sincere, profound emotion there is no longer a place for hysteria."

To maintain his thesis Babinski is obliged to show that no other agents can cause hysterical symptoms but suggestion (note that he

does not recognize the pathological state), and for this purpose he must eliminate emotion—the agent to which so much influence has been hitherto ascribed. If emotion can be eliminated, no agent, he assumes, is left but suggestion. "Without doubt," he admits, "there is reason to believe, a priori, that physical concussion, and especially moral shocks, can weaken the personality, enfeeble the critical faculty and decrease sensibility and thus play an indirect rôle in the development of pithiatic troubles; but these agents act only in preparing the ground for suggestion. Are they capable, as has been maintained, of creating by their own forces, suggestion being wholly eliminated, the hysterical phenomena? In other words, a paraplegia, an hysterical monoplegia, for example, can they develop under the influence of an emotion without any antecedent mental representation, automatically, after the fashion of the secretion of the sweat glands, intestinal flux and erethema? Such is the problem, essential for whoever would solve the nature and mechanism of hysteria, that it is necessary to submit anew to investigation."

In passing I would insist that this is a very inadequate conception of the problem. However, I will take it up for examination as laid down by Babinski.

This distinguished neurologist has given a great deal of time and energy to demonstrate that emotion does not induce hysterical troubles. And with this end in view he has examined situations, like the Paris morgue, which have been the scenes of much emotion on the part of distressed relatives, without finding evidence of resulting hysterical troubles. For, he argues, if emotion is capable of causing hysterical accidents, we should find them in such circumstances. It seems a pity he should have expended so much misdirected effort. With a sound conception of hysteria, and of the psychology of emotion, any one could forecast that his investigations would give negative results. No one would hold that a simple discharge of emotion, as a biological reaction to the environment, induces psycho-physiological disintegration and automatism. Emotions—fear, anger, etc.—are biological psycho-physiological instincts or instinctive reactions. In the course of life's experiences they become organized with ideas of objects—the mental experiences of life and the world—into sentiments and systems of sentiments and by their impulses give driving force to our antecedent thoughts, wishes, points of view, mental attitudes, etc. It is these mental systems, thus organized that, when unduly excited, are brought into conflict with opposing systems and by the discharge of

their emotional forces disrupt the normal psycho-physiological integration and equilibrium, repress certain systems, dissociate others, and give rise to subconscious activities that induce many varieties of automatic phenomena. The discharge of emotion, excepting when an element in a preformed system of ideas, probably rarely results in hysterical troubles, but accomplishes only its biological purpose and passes off without untoward effect. What is essential is the organization of the emotional instinct in a system of ideas and it is the whole system that, discharging its emotional impulses, induces disintegration. Failing such an organized system or "complex" we should not expect the disruptive effects.

In the second place, his contention is that hysterical phenomena never appear at the moment of, or immediately after the emotional shock, when the emotion is at its height, but that always "between the emotional shock and the presence of hysterical (pithiatic) accidents there is an intervening phase, sometimes quite long, which Charcot called the 'phase of meditation,' during which auto-suggestion or hetero-suggestion have the opportunity to intervene" and induce the accidents. In support of this view he cites the observations of numerous writers who had the opportunity in this war to observe so-called "shell shock" at the front and behind the lines. Babinski, seems at first to be supported by these observations, for it seems that those symptoms of hysteria which Babinski elects to call alone pithiatic or hysterical, that is the paralyses, anesthesias, etc., rarely developed at the time of the emotional shock but only appeared after an interval, when the soldier had reached some place behind the lines.

A study of the reports, however, shows that the cases, apparently without exception, exhibited at the emotional period immediately following the shock, hysterical mental symptoms of a very marked character. Amongst the symptoms commonly described are amnesias, hallucinations, deliria, inability to respond to questions, even when attempts were made to force a response, apparent incapacity to perform a voluntary act, states of hebetude, stupor, confusional states, states allied to fugues, mental dullness, irrational states, tachycardia, tachypsnoea and tremor.

What are these, it may be asked, with the exception of the three last (which are only the physiological manifestations of emotion), but states of dissociation with automatisms, or unregulated and uncontrolled functioning of disintegrated psychological systems? They are from the modern point of view typical and pure symptoms of the hysterical pathological state. Amnesia, for instance, as already point-

ed out, is well recognized as a manifestation of dissociation. In these very cases, then, cited by Babinski in support of his thesis, we have evidence of hysterical manifestations induced by something else than suggestion, and we must remember that this something else is conditioned, at least, by emotion. It may be also pointed out in passing that these mental symptoms, following the discharge, may be brought within Babinski's own definition of hysteria in that they are capable of being produced experimentally by suggestion.

That certain symptoms like paralysis, anesthesia, dumbness, deafness, etc., do not appear until a later period may be a fact, as a matter of observation, but the real question is *why* do these particular symptoms appear only later, while other and mental symptoms appear at the height of the emotional discharge? It is a question of the WHY. The fact which seems to have been brought out by observations during this war is that the hysterical state manifesting itself by mental dissociation, can be induced immediately under mental stress and strain at the moment of the emotional discharge, while certain other symptoms, in the great majority of cases, develop only after a period of incubation.

Babinski seems to assume that because this latter class of symptoms develops only after a period of incubation that they must be due to suggestion, particularly hetero-suggestion, although auto-suggestion may be the genetic factor. To this assumption exception may be taken. That many hysterical stigmata, particularly the paralyses, anesthesias, the crises, deafness, dumbness, etc., have their genesis in psychological factors there can be no doubt, and I think that since 1885 there never has been any doubt. That we have all known for a long time. But this is far from saying that they are due to suggestion, whether auto or hetero. The genesis and the mechanism are far too complex for such a simple explanation. They may be called "defense reactions," if you like, according to one theory. But the psychological mechanism of a defense reaction is complicated. This may be due in individual cases to mental conflicts, to subconscious mechanisms of different kinds, etc.

Babinski's fundamental error is not recognizing that the hysterical state is one of functional dissociation and that any psychological factor capable of producing such a dissociation, whether it be emotion or a conflict, is capable of producing hysteria. The mechanism by which individual symptoms is produced is another problem. It may be suggestion, as we all know, or it may be a very complicated mechanism which still requires solution.

THE CLINICAL PSYCHOLOGIST

BY DAVID MITCHELL, PH. D.

THE field of the clinical psychologist is that of individual diagnosis and treatment. The term "clinical" suggests individual, rather than group or mass reactions. In medicine it has referred to the bedside practice of the physician, and is, therefore, individual. Likewise, professional activities among psychologists have set the tendency of making it refer to the condition of one person rather than to that of any number or groups of people.

In this respect, clinical psychology may be differentiated from that of several other types of applied psychology. Educational, vocational, or industrial problems may be individual from the psychological point of view, but each one differs in the sense that it is primarily a treatment of mass results.

Educational psychology takes up the problems of the rate of progress in school subjects, the period at which different elements of the curriculum may best be considered, the methods of instruction and the attitude of the children to class-room work. Progress in the various school branches, such as arithmetic, reading, spelling, writing, is measured by means of educational tests. They are largely psychological in their nature, but are devised and administered for groups rather than for any particular individual. The chief consideration is the average or group score, with the possible variation from that average. The score of one child is seldom of material importance.

Vocational psychology has to do with the determination of aptitudes and qualifications for specified occupations. It does not consider the individual in his relation to those aptitudes. Its point of attack is the question of those traits or qualities which are essential for proper functioning in a certain activity. In other words, it is the occupation or activity which is the point of attack and not the individual who might possibly engage in that occupation.

Industrial or commercial psychology has a number of phases. Advertising is one of the greatest industrial or commercial problems, and it is largely a matter of psychology or the reaction of groups to the method of presentation or method of appeal. The question for the psychologist is: How does this particular presentation, or how does this combination of appeals touch the great mass of people. In

other words, advertising is not concerned with an individual, but is concerned with the reactions of a group. Trade tests, while applied to an individual, are carried on with the chief point of attack being the efficient carrying out of the particular activity. It is a matter of classification into groups rather than understanding why one person does or does not adapt himself to the occupation. The processes in the industrial plant are considered rather than one's reaction toward them, or possibility of his adaptation to the task.

From all of these activities clinical psychology is differentiated by its special problem. In each one of them the individual may be considered and, in so far as he is, we may say that clinical psychology over-laps these other fields of applied psychology. This simply serves to emphasize the fact that the clinical branch is concerned altogether with the mental functioning of one person. The aim is to understand his ability, his emotions, his social reactions, to find out the existence of any special abilities or disabilities, and on the basis of all this information to make recommendations for his adaptation to a present or to a proposed environment.

The clinical psychologist may also be distinguished from the man of research interests. The clinician is a professional person, interested in the application of scientific principles or in the diagnosis and treatment of cases. The experimentalist, on the other hand, is interested in the determination of mental characteristics without regard to what happens to his subject. In the laboratory he makes investigations of the thought processes, the emotions, the learning process, and the various other characteristics, but with no intention of applying his findings to the conditions of his subjects. That is, the clinical psychologist as a professional practitioner may be likened to the physician who considers the symptoms of his patient and prescribes methods of treatment. The research psychologist is likened to the physiologist or anatomist in the medical laboratory who makes his detailed experiments to determine the structure and function of the organism.

Preparation for Professional Practice: Every one considers himself more or less qualified in the field of mental therapeutics. Every physician, every salesman, every artist, every author, and in fact nearly every one who has ever thought about the problems, describes mental symptoms, diagnoses characteristics, and suggests methods of treatment. This claim is made explicitly by a great many of them. It is implied by the statements of many others.

To a certain extent it is undoubtedly a justifiable claim, but only

in the same way that most people can claim to be physicians. All people have certain remedies which they are ready to use or to recommend for a friend whenever he has a cold or a fever, or when there is a general feeling of lassitude and fatigue. Sometimes these recommendations go to the extent of suggesting what is to be done in such diseases as scarlet fever, diphtheria, or pneumonia. While we recognize the skill of many of these "would-be" practitioners, our admiration is somewhat tempered since we know that they lack all specific preparation in medical fields. We now are so little in favor of the practice that we make it a penal offense for anyone to receive remuneration for such advice.

So far we have been much more tolerant of the person who picked up his knowledge of psychology in a haphazard, indefinite way. We are convinced that the practice of medicine is impossible without thorough grounding in the knowledge of medical sciences. Only recently, we have come to the conclusion that mental difficulties are as important from the social point of view as any physical disabilities. With our knowledge of the increased importance of the mental characteristics there has come a recognition of the necessity for thorough training in psychology for anyone who would offer professional advice.

It may occasionally be claimed, as it has been recently, that the situation with medical practice is different from that of psychological practice. We say that an individual who is suffering from diphtheria is not only in danger of death, but is also a source of contagion or infection for all other members of the community. With his physical health and with the welfare of the community from the physical standpoint, it has been argued that we must be much more concerned. As an actual fact, however, I doubt if any case of diphtheria can be a much greater social menace than a person who has had bad mental habits established by his type of experience. The education of each member of a group is more or less affected by the reactions of other members. The various mental characteristics are as directly effective in establishing social or anti-social reactions as is the physical condition of an individual in affecting the physical welfare of other members of the community.

Particularly is this true in the case of children whose emotional life is disturbed by the reactions of adult associates. The existence of fears, of feelings of inferiority, of self-consciousness, of abnormal attitudes toward the sex life, is, to my notion, much more significant in considering the welfare of the individual and the community, than the

physical condition of those suffering from colds, fevers or other physical disabilities. Our legislation today provides penalties for doing physical harm. The death sentence may be carried out for murder and assault may be punished by meting out penalties of greater or less severity. But our legal codes still ignore the effect of those actions which do not result in visible bodily harm. Yet I am convinced that frequently the results of these latter actions are much more calamitous for the individual and for his functioning as a member of the group. Society today is suffering more through undesirable mental habits than through any physical harm done to any group of individuals. The diagnosis and correction of the various emotional complexes which are the groundwork of faulty mental functioning should not be made by anyone not qualified for it by intensive training.

As a minimum of training, I would suggest the equivalent, at least, of the requirements for the degree of Doctor of Philosophy. I shall not try to outline the curriculum in detail, but there are some things of sufficient importance to merit mention. In the preliminary part of the course leading ordinarily to the bachelor's degree, considerable time should be given to a study of the languages in which the literature of the science is written. This would involve thorough understanding of the three modern languages, English, German and French. Obviously the first one should be thoroughly understood, and since so much of the literature of psychology and psycho-pathology is in the latter two the student should be sufficiently familiar with them to be able to understand the written discussions.

In the field of science the student should have a thorough course in biology, with some training in chemistry and probably in physics. The medical laboratory should contribute its quota of training. The anatomy and physiology of the nervous system are rather too much neglected. The psychologist preparing himself for professional practice should not be totally unfamiliar with the physical mechanism.

Either during the latter part of the undergraduate course or in the early part of the advanced work, a student should become familiar with the general problem of education and educational procedure. At the same time a study of sociology, with a knowledge of the development of social institutions, social customs or mores, and of our ideas concerning the reasons for and punishment of delinquency would be most appropriate.

After the training in biology, or possibly co-incident with it, psychology should be undertaken and continued, until a thorough under-

standing of the behavior of the human organism has been obtained. The equivalent of three full years' study would not be too much for this purpose. I cannot take time to outline fully the various courses. They should, however, cover thoroughly the topics of sense perception, memory, association, imagination, illusion, apperception, habit formation and the learning process, the nature of reflex and instinctive activities and the emotional responses.

Not by any means the least important is actual practice in the examination, observation and diagnosis of cases. The mental processes of normal subjects should be analyzed and a student's experience with cases of mental deviation, unusual intelligence, delinquency and other forms of abnormal behavior should be both intensive and extensive. In this training emphasis should be placed upon the necessity of an accurate technique, careful observation and a distinction of the latter from conclusions. That is, there should be a thorough training in methods of obtaining results and in the interpretation of them.

There are two related studies with which the student should be quite familiar. They are psychiatry and psychoanalysis. In psychiatry he should study the various types of mental disease and for this purpose should be given laboratory work in a hospital for the insane with seminar work which would involve three hours a week covering two years. In psychoanalysis, the important literary contributions must be digested. I would suggest at least a seminar period of two to three hours per week throughout one year. In this time the literature could be taken up and an analysis of cases considered. I believe that in the field where psychoanalysis has been so much the vogue the clinical psychologist will find one of his most important problems. We do not need to make any assumption as to one or two fundamental causes of social or mental mal-adaptation. We do need to recognize, however, that great numbers of people who cannot be classed as psychopathic or insane are yet badly adjusted socially and mentally. It is within the province of psychology to make an analysis of these cases, to diagnose causes and to prescribe methods of treatment which will bring about the desirable mental and social adaptation.

It is obvious that the psychological associations can have but little direct influence on the courses offered in many of these subjects. The departments of sociology, biology, languages and education, as well as the laboratories of physiology or neurology will prescribe their own procedure. In psychology, however, the influence of the association should be and I believe can be enormously beneficial. We have

reached a stage in the development of the scientific procedure that a standard of efficiency might well be recommended. I believe that the various departments of psychology should confer and co-operate to such an extent that training in psychology for professional purposes may be maintained at a uniformly high standard.

The Problems of Clinical Psychology. A brief outline of the problems which a clinical psychologist has to face, is now appropriate. By virtue of group tests children or adults may be divided into groups, consisting of individuals with approximately the same degree of intelligence. After this classification, however, it will be found that there are some individuals who do not adapt themselves to the particular group in which they are placed. They must be examined by the clinical psychologist. The cause of their faulty adaptation must be determined by a *psychological analysis* of the difficulties. It may be that the classification was faulty in the beginning, and that with a transfer to another group, and consequently a new set of stimuli, the adaptation will be satisfactory. On the other hand, there may be peculiarities or idiosyncracies, special abilities or disabilities, which make the adaptation of that individual extremely difficult. A diagnosis of causes, with a recommendation for curative measures will then be made by the clinician.

Another field in which clinical psychology should find a wide opportunity is in that of functional disorders. Ordinarily this problem has been supposed to be within the realm of the psychiatrist or neurologist. It is conceivable that organic lesions might sometime be demonstrated, but according to present knowledge, it is largely a matter of nervous or neurone excitability stimulated by an unfortunate or undesirable environment. An understanding of the effect of the stimuli with consequent modifications should bring about a readjustment. The clinical psychologist who qualifies with the training outlined will see in these cases an opportunity for service of enormous value.

There is still another group of cases which has not been considered by the psychiatrist or neurologist, yet whose mental adaptation is very faulty and for whom curative measures should be prescribed. The various emotional factors, such as fear and anger, or the sex instinct, have been responsible for many of these faulty developments. Fears, both reasonable and unreasonable, have been developed and later suppressed without a conscious analysis of the causes and without an understanding of the situation responsible for them. In other

words, there has not been a proper direction given to the emotional energy, and somewhere in the field of unconscious operations the emotional effect is operating to produce faulty mental and social adjustments. Many of these cases are considered by the ordinary observer to be quite normal people. Occasionally they are recognized by the expert on casual observation. Usually no suspicion is aroused but I believe that many are functioning at a lower level of efficiency than their native ability and capacity warrants, and that with proper psychological analysis causes could be determined and measures of cure recommended. The clinical psychologist will have a glorious opportunity for improving mental efficiency as he engages more freely in this proper field of activity.

I would present just one illustration of the type of person who may be described in this way. There came to me several months ago a woman who for the last five years has, to all ordinary appearances, made satisfactory adjustments both from the mental and social point of view. About the beginning of the period she married and apparently the marriage has been successful. The woman seems to carry the responsibility of wife and mother quite well as far as the casual observer reports. Her own story, however, gives one an entirely different impression. Mentally she is distressed to such an extent that proper functioning seems practically impossible. Her activities as a home maker do not satisfy the 'inner urge' or emotional drive. Obviously they cannot be satisfactorily carried on. I am confident that until we have developed in her a courage and enthusiasm for certain artistic efforts that she will never be as efficient as she might, either mentally or socially.

The story of her life is extremely interesting, and can be considered unusual, I am convinced, only because we do not know the stories of the lives of very many of our associates. Left an orphan at the age of six, she was brought to this country by a married sister with whom she lived until she was about fifteen years of age. During that time her life was anything but happy. The memory of it is distressing at the present time. Dressed more shabbily then her playmates and constantly chided and condemned as a useless burden, she finally believed it. The chief result was to develop in her a feeling of inferiority, from which she has never recovered. At the age of fifteen she ran away from her sister's home and went to live with some friends.

After considerable discussion and further trouble she was allowed

to remain with these friends and to enjoy something of life's opportunities. She attended a church in which the music seemed to give her great delight, and was one day heard singing by a master musician and vocal teacher. Through his efforts she was given aid in the development of her talent, and about ten years later had a contract which called for remuneration for her to the extent of $450 per week. During her training she had overcome the feeling of inferiority to such an extent that she had been able to do this work, but according to her own report she was forever apprehensive of failure. Her efficiency was decreased because she could never get away from the idea that people were judging her as quite inferior.

She finally was encouraged to make another effort for further improvement, and went to Europe to study under a very famous master. Whatever this master's skill in developing other people's talents was, he failed utterly to appreciate the type of mechanism with which he was dealing in this case. Instead of encouragement he gave condemnation, and from the standpoint of the particular person with whom he was dealing his condemnation was given in a most brutal manner. After various efforts to overcome the feeling which he engendered, and to continue with her studies, this "prima donna" whose name would be recognized by many, even if given now, gave up the attempt to further cultivate her talent and returned to this country with no ambition, or at least with not sufficient courage to continue as she had so gloriously begun.

Her marriage, shortly after her return, was considered a haven of refuge, an opportunity to get away from the mental conflicts and from the fears which she suffered. As far as the fundamental talent is concerned, there is little doubt of its enormous social value. But it will be a matter of months, if not of several years, before confidence is sufficiently re-developed that this person will be able to function mentally and socially in the way for which her native ability and her original talent qualified her.

Whatever the claims of psychoanalysis and psychopathologists may be, in my opinion it is with such cases as these that clinical psychologists will find a wonderful opportunity and, by virtue of knowledge of psychological processes, will be able to be of enormous value and benefit to them.

A LECTURE ON THE ABUSE OF THE FEAR INSTINCT IN EARLY EDUCATION

BY BORIS SIDIS

"CHILDREN achieve good by fear of punishment" thus psychologizes a writer of editorials in a far advanced paper of a far western, progressive settlement, "or," he goes on philosophizing, "good is thrust upon them by their teachers, their parents, and the policeman on the beat. It is the natural instinct of the human animal to lie and to steal. Why do we spank them as soon as they are weaned?" "Why is it" mused Fagin, the educator of Oliver Twist, "why is it that children enjoy picking pockets, and old folks are fond of stolen goods?" This birch pedagogy the learned editor regards as good Biology. Then the wise Solomon is cited with his saying: "He that spareth the rod hateth his son." With his sense of western chivalry the editor thinks that girls are better, but he does not say what he would do with the Solomon's rod in the case of the fair sex. He concludes, however, his educational wisdom which for some reason or other he prefers to dub as biological, whatever he may mean by it, by saying that: "We are not thoroughly convinced that the elimination of the rod as a correctional instrument has served to make the world better or wiser." I am not quite sure that this scientific editor expressed the opinion of all his western colleagues, but it shows what a far advanced western editor may offer to his reader as the most advanced biological thought by drawing on the good commonsense of Mother Goose and on the proverbial wisdom of King Solomon for the pedagogic edification of his western audience.

This wisdom of viewing the child as a little brute and training it by fear and force is not confined to editors, but is also maintained by certain types of educators. "Obedience and discipline are the mainstay of the family and the school," told me a well known educator, a principal of a normal school. "I control my children with kindness, if possible, and if needs be, by force and punishments." The child is regarded as a sort of a little beast, a kind of young ape, at best a little savage. The child, accordingly, is trained to act not by the light of reason, but by the command of superior force. The child is ruled by fear. Our young generation is trained by fear into discipline and

obedience. We thus suppress the natural genius and originality of the child, we favor and raise mediocrity, and cultivate the philistine, the product of education, ruled by rod, not by thought.

As a protection against fear the child, in self defense, becomes secretive, evasive of truth, and cowardly of action. These traits of character, acquired in early childhood, due to training by rod, fist, intimidation, and fear, become often ingrained in the very soul of the child to last him his life long. Seared by the rod, the scourge, and the fist the child often emerges a moral and intellectual cripple. Cowered and terrorized by the awakening and cultivation of the most powerful of impulses, the impulse of self-preservation and the most uncontrollable of all instincts, the fear instinct, the child can never fully rid himself of all the distressing, morbid consequences. Fear will stay with him and dog his steps all his life long.

As I have pointed out in my works on abnormal mental life, fear is the most fundamental of animal instincts; it is the companion of the most primitive impulse of self-preservation, and together they form the source of what is known as psychopathic maladies, or functional mental diseases, almost infinite in the variety of their manifestations, often extremely virulent in their mental disintegration.

Once this fear instinct and its companion self-preservation are aroused morbid mental life grows like an avalanche in its downward course. In later life this impulse of self-preservation and fear instinct become manifested in various ways, giving rise to the most distressing nervous and mental symptoms. In my medical practice, as specialist of nervous and mental diseases, I have again and again traced the worst forms of functional maladies to the impulse of self-preservation and fear instinct, aroused by education and unfortunate experiences in the early life of the patient.

Training by fear, submission, and obedience inhibits the development of the rational controlling element of the mind, brings forth the lower reflex automatic, subconscious side of mental life, heightens the suggestibility, opening wide the door to all kinds of nervous and mental germs, weakening the mental and moral constitution of man, tormenting him with the great array of obsessions, characteristic of psychopathic diseases in which the suffering of the patient is often greater than that experienced in many diseases of a purely organic nature. Man becomes unreasonable, capricious, driven as he is by the all-powerful impulse of self-preservation and by the furies of the fear instinct. *The centripetal force of self-preservation with its centrifugal*

fear-instinct make the victim revolve in the same recurring orbit of automatism round his own ego as a centre of attraction. Being pitilessly driven by the furies of his fears, he is always hiding and running from life, he is afraid to act openly, fairly and squarely. He always dodges the issue, always in a state of indecision, lacking self-confidence, independence, self determination, and self control. Double dealing, deception, lying, hypocrisy, and an illimitable selfishness form the main traits of his character, the very traits which the wise western editor and educator placed in the souls of the children known to him. The child is by some people, even with a literary turn of mind and having an influence on the community, regarded as a little brute, a little savage, born to deception, to stealing, to crime and vice. No wonder with such views of the child's nature, the little ones are advised to be treated by punishments, by corrections, by the rod, the whip, and the stick, generally by fear and by violence, a training unfit even for dogs. And still when we turn to the really great thinkers of humanity, we find that the child is considered as free from vice, crime, and sin, that perversions, delinquencies, and vices are impressed on the young by family, companions, and society of adults. From Plato and Aristotle to Montaigne, Locke, Rousseau and Tolstoy the same or similar verdict is given as to the nature and character of the young.

"We should not permit" says Plato "the artists of crafts (note: such as our modern movies) to impress signs of an evil nature, of dissoluteness, meanness, and ungracefulness, so that our young generation may not be reared amongst images of vice, as upon unwholesome pastures, culling much every day by little and little from many places, and feeding upon it until they insensibly accumulate a large mass of evil in their souls. We ought to have artists of another stamp who by the power of their genius can trace out the nature of the fair and the graceful, that our young generation dwelling as it were in a healthy region, may drink in good from every quarter, whence any emanation from noble works may strike upon their eye or upon their ear, like a gale wafting health from salubrious lands, and from their early childhood bring them into love and harmony with true beauty of reason. We should give the children an education in which rhythm and harmony may sink most deeply into their soul." "Children," tells us Aristotle, "should not be brought in touch with evil, or with anything that may suggest vice and hatred." From their infancy the young should be surrounded by an environment of grace, harmony, and beauty, by the good, the true, and the beautiful.

Education by force, punishment, repression, rod, whip, and knout will only train a generation of slaves.

Plato insists that "you must train the children to their studies in a playful manner, and without any air of constraint, with the further object of discerning more readily the natural bent of their charact rs." Montaigne with his deep insight into human passions and clear understanding of human life declares that vigor and liberty become fully extinct when minds become subjected to caprice, authority, and phantasies of others. According to this great critic of all dogmatism, education should be directed by a sweet-severe mildness. Children should be treated not by fear and cruelty, but with kindness and gentleness. Nothing so much degrades and bastardises a young nature as violence and compulsion. He seems to lose his patience and genial nature when he comes to write of the school. "The school is a very prison of captivated youth," a prison where misdeeds are punished before they are committed. Even old Quintillian was not slow in noticing the fact that imperious authority compulsion, and punishments bring many dangerous consequences. Helpless, defenseless as the child is it should not be treated by a stern and frowning countenance and with hands full of rods. "I would do" says Montaigne, "as the philosopher Speusippus did who caused the statues of Gladness and Joy, of Flora and of the Graces to be set up round about his school house," winding up with the following epigrammatic saying: "Where their profit lies there should also be their recreation!" Montaigne's education was of the precocious type in which love was the predominant feature. "The chief thing my father required of those into whose charge he had committed me was a sort of well conditioned mildness and ease of disposition. For amongst other things he has specially been persuaded to make me taste and apprehend the fruits of duty and science by an unforced kind of will, and of my own choice; and without compulsion or rigor to bring me up in all mildness and liberty." Latin being the literary language of that time, Montaigne could talk Latin before he could understand French. He was spoken to in Latin "before unloosening of my tongue, when being yet at nurse." "I entered college at the age of six. . . . My Latin was corrupted. . . . I graduated at the age of thirteen, and had read over the whole course of philosophy."

Locke tells us that "a slavish discipline makes a slavish temper. The child submits, and dissembles obedience, whilst the fear of the rod hangs over him. Beating them (children), and all other sorts of

slavish and corporal punishments, are not the discipline fit to be used in the education of those we would have wise, good, and ingenuous men. . . . Playing and childish actions are to be left perfectly free and unrestrained. . . . The right way to teach them (children) is to give them a liking and inclination to what you suppose to them to be learned, and what will engage their industry and application. . . . Children being restrained by their parents only in vicious things (which in their tender years are only a few) things, a look or a nod only ought to correct; or, if words are sometimes to be used, they ought to be grave, kind and sober, representing the ill or unbecomingness of the faults, rather than a hasty chiding of the child for it. . . ."

If we turn to Tolstoy, the great artist and reader of the human heart, we find this attitude, as to the freedom of children from vice and crime, still more emphasized. "There are two important rules in education" writes Tolstoy. "(1) Live well according to the highest moral ideal. (2) Perfect yourself continually, and conceal nothing from your children, especially your faults, mistakes, and shortcomings. Children are much more sensitive morally than are adults. Without saying or even being directly conscious of it children not only see the faults of their parents, but even the worst of all faults, their hypocrisy. . . . The education of children is self-perfection." Tolstoy is strongly opposed to the way of education as given by the western editor, by trainer and policeman in public school and police court. Such sources are contaminated. Disease, corruption, and degradation alone can result. "Terrible" he says "is the corruption of the mind which the (educating) authorities subject the children during the course of education. . . . Public education, such as we have at present, is directly and artfully organized for the moral corruption of children. Make all sacrifices to keep children away from school." Finally he makes the significant statement, true and beautiful as to its meaning: "If I had to choose,—to people the earth with saints as I am at all able to imagine, but with no children, or with such people (full of imperfection) as we have at present, but with constant coming of new generations of children,—I would choose the latter."

He who is regarded as the greatest of teachers of humanity in admonishing his disciples and apostles held out the child as the ideal of human greatness. "And there arose a dispute among them which of them should be the greatest." When Jesus saw the thought of their heart, he took a little child, and set him by his side, and said unto them: "Whosoever shall receive this little child in my name receiveth

me." (Luke 9, 46). "And they brought him little children that he should touch them: and the disciples rebuked them. But when Jesus saw it, he was moved with indignation, and said unto them, Suffer little children to come unto me; forbid them not; for of such is the Kingdom of God. Verily I say unto you, Whosoever shall not receive the Kingdom of God as a little child, he shall in no wise enter therein. And he took them in his arms, and blessed them, laying his hands upon them." (Mark 10, 13). This deep, sympathetic insight into the child's nature and genius, this profound love of the child, touching as it is in its simplicity and grandeur will ever remain at the very basis of all true human education. Put the little one in front of you, take him tenderly in your arms, give him your heart's blessings, surround him with the halo of love, all this will ever go to form the eternal image of the greatest of teachers of humanity.

One important point claims our attention in the early education of children. We should immunize our children against mental microbes, against superstitutions and prejudices, against all forms of harmful beliefs, as we vaccinate our babies against small-pox. The cultivation of critical judgment and the knowledge of good and evil form the powerful constituents for the neutralization of virulent toxins, produced by mental microbes.

We should not at the same time neglect proper conditions of mental hygiene or mental sanitation. We should not people the child's mind with ghastly and ghostly stories, with uncritical beliefs in the supernatural, and with article of creed which under the cloak of love are charged with arrogance, intolerance, and hatred. We must guard the child against all evil fears, force, violence, superstitions, prejudices, and credulity. Plato in his immortal dialogues refers to this point in early education: "What then is the education to be? Perhaps we could hardly find a better one than that which the experience of the past has already discovered, which consists, I believe, in gymnastic for the body, and art for the mind. And shall we not begin with the art, the education of the mind, rather than with the education of the body? —Undoubtedly we shall.—Under art or music we shall include narratives, or not?—Yes, we shall.—And of narratives there are two kinds, the true and the false?—Yes. And must we instruct our pupils in both, but in the false narrative first?—I do not understand what you mean," Adeimantus, his interlocutor replies.—"Do you not understand that we begin with children by telling them fables? And these, I suppose, to speak generally, are false, though they may con-

tain some truths; and we employ such fables in the treatment and education of children at an earlier period than gymnastic exercises.—True.—That is what I meant when I said that art or music ought to be taken up before gymnastic.—You are right,—Then you are aware that in every work the beginning is the most important part, especially in dealing with anything young and tender? For that is the time when any impression which one may desire to communicate is most readily stamped and taken.—Precisely so.—Shall we then permit our children without scruple to hear any fables composed by any authors indiscriminately, and so to receive into their minds opinions generally the reverse of those which, when they are grown up to manhood, we shall think they ought to entertain?"

Aristotle follows his great teacher Plato by laying down the fundamental rule of education: "We should be careful what tales or stories the children hear. For the sports of children are designed to prepare the way for the business of later life." "From an earliest age all that is mean and low should be banished from their sight and hearing. . . . No image or picture representing unseemly action should offend the eyes of the young."

We should counteract the baneful influences of the pathogenic, pestiferous mental microbes which now infest our social air, since the child, not having yet formed the antitoxin of critical judgment and knowledge of good and evil, has not the power of resisting mental infection, and is thus highly susceptible to mental contagion, on account of his extreme suggestibility. The cultivation of credulity, the absence of critical judgment and the lack of recognition of good and evil, with consequent increase of suggestibility make man an easy prey to all kinds of social delusions, mental epidemics, religious crazes, financial manias, patriotic wars, enthusiastic parades, resulting in slaughter and plagues which have been the baleful pests of aggregate humanity in all ages, and more specially in our times when the wave of social suggestibility of the worst type spreads like wild fire throughout the world. As long as the child will be trained not by love, but by fear, so long will humanity live not by justice, but by force. As long as the child will be ruled by the educator's threat and by the father's rod, so long will mankind be dominated by the policeman's club, by fear of jail, and by panic of invasion by armies and navies.

There are in the United States about half a million insane, while the victims of psychopathic, mental maladies may be counted by millions. Now that the war is over, there will come thousands upon thou-

sands of nervous and mental wrecks, under the name of shell shock or war shock, the unfortunate results of nervous exhaustion and fear shock produced by the war. Even before the war fully half the number of patients treated by the general practitioner were psychopathic in character. After this terrible war the increase of psychopathic cases will be enormous. Insanity can be alleviated,—but much, if not all, of that psychopathic misery known as functional, mental diseases is entirely preventable. For it is the result of our pitiful, wretched, brain-starving, mind-crippling, terrifying and terrorizing system of education.

In my medical work in nervous and mental diseases I have become impressed with the fact that the impulse of self-preservation, accompanied by its satellite, the fear instinct, plays a prominent rôle in the causation of psychopathic diseases. At the very outbreak of the war I predicted the occurrence of many cases of psychopathic diseases, known under the term of shell-shock or war-shock, which are sure to develop under the strenuous conditions and dangerous as well as poisonous environment full of favorable stimuli for the awakening of the impulse of self-preservation and its associated fear instinct. To quote from my work on *"The Causation and Treatment of Psychopathic Diseases"*: "In the present fearful war of European nations (this was written before United States entered the war) the pressure of invasion by the Teutons and their allies, a war unparalleled in the history of humanity for its extensive brutal destructiveness, a war in which all the inventions of ages are made subservient to the passions of greed, hatred, and ferocity, having one purpose the extermination of man, a war surpassing all battles waged by man, in such a calamitous slaughter of nations, the fear instinct comes to the foreground, claiming its victims, working havoc, among the frenzied, struggling armed masses and and terrified, stricken populations."

In my clinical study of numbers of cases under my medical care I have become convinced of the preponderant influence of the impulse of self preservation and fear instinct in early childhood in the causation of psychopathic nervous and mental maladies. Most, in fact we may say all, of functional, nervous, mental diseases have their origin in early childhood.

An early, suggestible mental life brought about by intimidation, by a persistent system of inhibitions, by overstimulation of the impulse of self-preservation and its associated fear instinct in early childhood are among the important factors of psychopathic diseases in later

life. In my work *"The Psychology of Suggestion"* I proved by a series of experiments that the conditions of suggestibility are: Fixation of the Attention, Monotony, Limitation of Voluntary Movements, Limitation of the Field of Consciousness, Inhibition. I have shown that these conditions are favorable to a disaggregation of consciousness. I have also pointed out that a disaggregation of consciousness with an inhibition of the controlling, waking consciousness is one of the important conditions in the causation of subconscious states with their abnormal suggestibility. In other words, the inhibition of the personal self, or even the limitation of the personal self, helps the formation of dissociations which constitute the soil of all psychopathic diseases. When the person, on account of a narrow training and a limiting system of education, based on force and fear in early childhood, becomes narrowed down in his range of knowledge and comprehension, when his superstitions and prejudices in mysterious agencies, such as transmission of telepathic "disease and death thoughts" and fears of various sorts of a spiritualistic, or Christian Science beliefs, and other religious faiths of the mystical types are impressed on uncritical and undeveloped minds, the predisposition to mental disaggregation and consequent psychopathic diseases becomes strongly pronounced. With the limitation and inhibition of the critical personal self, with the limitation and narrowness of personal life interests, there goes an increase of the sense of the unknown and the mysterious, often cultivated by religions based on impressive mysteries and superstitions with the baneful consequences of the development of the impulse of self-preservation and the fear instinct,—the cause of psychopathic diseases.

An uncultivated personality with a limited mental horizon, with a narrow range of interests, a personality sensitive to fear inhibitions, is a fit subject to all forms of obsessions. The fear instinct, fostered by mysteries, frights, scares, dread of sickness, dread of the moral mind and its shadows and fear of thought-transmission of deadly mortal ghosts of ideas, entertained by superstitious sects known by the pompous name of Christian Scientists, is a fundamental factor in the causation of abnormal mental states termed psychopathic. Fear impressed by moral and religious injunctions and duties by means of physical punishment, or by constant scares of punishment to come in this world or in another world, the enforcement of social taboos with the consequent dread of failure, degradation, and loss of character,—all go towards the cultivation of the impulse of self-preservation and fear instinct which in later life form the soil of functional psychosis with all

its baneful effects and morbid symptoms. Thus a psychopathic patient writes in his account: "I dwell on my childish acts, because of my religious training, because of the superstitions charged with religious and pseudo-moral emotions."

Perhaps a few concrete cases will bring out more vividly the fact of the pernicious effect of early education by means of force and fear. I have studied for years the many patients who have come under my medical care and treatment A close examination into the history of development of the trouble invariably brings one to the same sources of mental disease: Inhibition of the critical self in early childhood by means of force and fear, the overgrowth of the uncritical suggestible subconscious self with an abnormal hypertrophy of the impulse of self-preservation with its allied fear instinct.

As illustrations I give a few extracts from the many cases studied and treated by me:

A patient of mine, a professor in mathematical physics, a man of the highest achievements in this branch of science, writes: "I have always had a great fear of the supernatural when left alone. I am never afraid of robbers when alone at home, or animals when alone in the woods, but I am mortally afraid of the sudden appearance of some mysterious unknown, or of some departed, as, for instance, the ghost of one of my parents. This was always so and is so today, perhaps because I was very much alive to the situation at the time of my mother's death (my age eight) and of my father's death (my age eleven)."

A patient of mine, a physician, suffering from acute religious melancholic depression writes in his notes to me: "It is difficult to place the beginning of my abnormal fear. It certainly originated from doctrines of hell which I heard in my childhood, particularly from a rather ignorant woman who taught Sunday school. My early religious thought was chiefly concerned with the direful eternity of torture that might be awaiting me, if I was not good enough to be saved."

Another patient of mine, a bishop's wife, suffered from insomnia, from nightmares, from panophobia, or general fear, dread of the unknown, from clausterophobia, fear of remaining alone, fear of darkness, and numerous other fears and insistent ideas. All these morbid conditions were traced by me to impressions of early childhood. When at the age of five, the patient was suddenly confronted by an insane woman suffering from attacks of maniacal excitement. The child was

greatly frightened. Since that time she became obsessed with the fear of insanity. When the patient gave birth to her first child, she was afraid that she and the child would become insane. Many a time she had the feeling that they *were* already insane. Thus the fear of insanity is traced to an experience of early childhood, an experience which, having become subconscious, has been manifesting itself persistently in the subconscious.

The patient's parents were deeply religious of the good old puritanic type. The child was brought up not only in the fear of God, but also in the fear of the devil. Being sensitive and imaginative, the devils of the Gospel were to her stern realities, all the more so as the family believed in them as Gospel truth, and she was often threatened into good behaviour by interposition of the action of some diabolical agencies which punish little girls for not being good. The patient was brought up on brimstone and pitch from the bottomless pit for sinners and unbelievers. Every Sunday she was taken to church to hear a preacher who used to give her the horrors by his vivid descriptions of the tortures of sinners in the depths of hell. She was in fear and anguish over the unsolved question: "Do little sinners—girls go to hell?" Various states of fear dogged her steps all her life long. Unless specially treated fears acquired in childhood last throughout life.

I call your attention to a short account of a patient of mine, a prominent member of the Christian Science church. Among other troubles the patient was obsessed with a fear that her husband, also a Christian Scientist who also came under my medical care, had committed some heinous crime the character of which she could not fathom. Christian Science could not cure them of that mortal sin, and they came to me for relief. "Even if my husband" she told me "should confess to me the most awful of crimes, I would still suspect him of worse ones." A letter from the patient may best show her state of mind. "There is nothing new to tell you. It is the same old, pitiful story, only varied a little from day to day. I have no rest, not a moment's peace of mind. I lie awake for hours at night, sometimes the whole night; my days are full of anguish and unrest. . . . I am truly a crushed and heartbroken woman, and would almost be willing to give up the struggle, were it not for my dear little children who are dependent on me." Now an examination of the case disclosed the fact of training by fear in the early childhood of the patient's life. The patient had in early life a severe religious training,—an

intense faith in mysterious agencies was cultivated in her by the family which had been faithful adherents of Christian Science for years. She herself became one of the active members of the church. The patient was specially imbued with the noxious superstitious belief, current among Christian Scientists,—the belief in telepathic influences. She had implicit faith in the transmission of evil influences by thought-transference, a sort of mental wireless telegraphy which now forms the delusion not only of Christian Scientists, but also of many unbalanced psychopaths, insane and dements in asylums. She is firmly convinced in the presence of telepathic powers of "death-thoughts" sent by some wicked members of the Christian Science Church. She in fact even knows the lady, a Christian Science reader, a lady of unusual telepathic powers, who has been sending to her those evil telepathic influences. Fortunately that malicious lady, the reader of "Science and Health with a Key to Scripture," died, and my patient felt much relieved.

I wish to call your attention to another case investigated and treated by me with the co-operation of Dr. Morton Prince. The patient, a Russian, suffered from epileptiform attacks on the right side of the body. The whole right side was involved in the attack of spasms; the side was anaesthetic and analgesic,—the patient did not respond to touch and pain sensations on that side. The patient left Russia on account of religious persecution. Since childhood he lived in an atmosphere of fear and violence. A close examination revealed the history of the case which can be given here but in a few words. The full account of it was published in a medical journal. When about the age of sixteen the patient attended a ball in his native town. After midnight he was sent out to look for a ring lost by him on the way to the ball. The young fellow was superstitious in the extreme. His early education was quite neglected,—he could neither write nor read,—he had a firm belief in sprites, spirits, and ghosts. On his way he had to pass a cemetery. He became frightened—it seemed to him that somebody was after him. He fell down, and became unconscious from intense fear. In this unconscious state he was picked up and brought home. His present epileptiform attacks date from that incident. He suffered from major attacks reproducing the accident at the same date and at the same hour when the incident occurred. The attacks, in short, reproduce the original accident as well as the condition of fear, convulsions, struggles, unconsciousness with resulting

anaesthesia on the same side on which he fell in his panic of ghosts coming to attack him from their graves in the cemetery.

Here is another case: A patient of mine, a young lady suffered from all sorts of nervous troubles and mental depression. The history of the case may be given in the following outline: As a child the patient was sensitive and nervous. She was brought up in fear, and was extremely impressionable. She liked to listen with trepidation to stories of spirits, goblins, and ghosts, and was in mortal fear of evil agencies and disabolical influences. She did not fare any better in her sleep, since she suffered from frightful dreams and nightmares, developed in her by the general state of apprehension. The patient passed her childhood in continuous fear of unknown and mysterious influences, surrounding her on all sides. Later on the fears apparently lapsed, but they really did not disappear—they became subconscious. It was these subconscious fears of early childhood that were manifested in the stress and worries of fully developed womanhood as states of anxiety of some mysterious impending evil,—the basis of her nervous condition.

I cite here a few extracts from the rich variety of autobiographical notes, submitted to me by my patients in the course of my investigation and treatment. "The earliest recollection of my fear that I have" writes a patient suffering from a severe mental trouble "goes back to my early childhood. I heard that wicked people would be judged after death and irrevocably sentenced to eternal torture in fire, and the idea raised a feeling of the most intense horror in my mind, lest I should not come up to the necessary standard in that dread day of judgment. I used to resolve to be good, particularly on reflection after going to bed, that I would be better so as to escape. However, the fear was rather vague.

When I got to be about eleven or twelve years old the fear got to be concrete and more constant. Then I feared that some remark I had previously made about God might have been blasphemy against the Holy Ghost which the Bible says is not pardonable in this and the next world. . . . By the time I was sixteen I had become very much demoralized, afraid of facing my fear. I went all to pieces with fear. . . ."

Another patient of mine, an engineer of ability, gives the following account: "You will remember I told you that my step-father was a liquor-dealer. Throughout the time he was in business we either lived over the bar-room or else lived in the place where the liquor was sold. My

step-father was a heavy drinker, a man of violent nature, and decidedly pugnacious. As a child I have been beaten, terrorized by my step-father, and scared to death by drunken brawls. Many a night have I been dragged out of bed by my mother who would flee with me to a neighboring house for safety. Until I was seventeen years old I lived in continuous terror of something going to happen. If my step-father was arrested by the police, our home would be the scene of turmoil. One night he came home all covered with blood as the result of a fight with thugs. Another time he left home with a pistol for some quarreling drunks, and returned shot through the hand. My step-father has been subject to nightmares nearly all his life. He would cry and moan, unable to move, until someone would shake him out of it. He was terribly afraid of them. I remember he would say that he would die in one of the attacks. I used to be left alone with him quite frequently, and I stood in constant fear of his dying. If he fell asleep (as he frequently did in the day-time) I would either wake him or watch his respirations, to see if he was alive. At other times I have been awakened in the night by his cries, and would assist my mother in bringing him to consciousness. It was during one of these attacks that I became aware of my heart palpitating, and whenever he had such a spell, I would be in a state of fear and excitement for some time after. He would have these nightmares nearly every night, and sometimes four or five times in one night. I began to have attacks of dizziness in the streets, and finally, one day, all the symptoms and fears of the attack came on in school. From that time on I have watched my respiration, suffered from dizziness, from depression, and sadness."

In the autobiographic notes of another patient, a physician of high standing in his profession, the account of the history begins with the following significant statement: "I was bred in fear from my childhood. My training and education were essentially religious, of an authoritative and terrorizing character." Other patients preface similarly their autobiographic accounts of the history of their troubles with words no less unmistakeable as to the significance which the oppressive fear system of education played in the misery, suffering, and ruin of their life. Thus one patient opens her autobiographic account with a statement which in my experience is fairly characteristic of thousands of other cases, in fact, it may be regarded as typical of all psychopathic afflictions: "I am a married woman of fifty-two. All my life I have been imprisoned in the dungeon-keep of fear. Fear paralyzes me in every effort . . . In childhood every-

thing cowered me . . . I was in agony of fear." . . . She concludes with the following: "In my childhood hell fire was preached . . . I was bred in fear, and self-destruction resulted."

The great Italian physiologist, Mosso, agrees with the dicta of the greatest thinkers on the subject of child education, from Plato and Aristotle to our own times. "Every ugly thing," says Mosso, "told to the child, every shock, every fright given him, will remain like minute splinters in the flesh, to torture him all his life long."

If we wish to have a strong, healthy, happy race of men, we should lay a good foundation in the education of early childhood. We should avoid all means of brutal, slavish training which cripple man's individuality, freedom, and happiness. We should not use violence and fear. We should be careful to remove from the children all that is brutal, ugly, vicious, and fearsome. We should surround our young with the graceful, the true, the beautiful, the good, the kind, the lovely, and the loving.

Permit me again to trespass upon your patience by citing the remarks on education made by the great Stagirite, the master of human thought:

"Education of man should develop the best in man. Happiness is assumed to be the aim men strive after. Happiness, however, is virtuous activity. The active life is the best, both for society and the individual. That society is best in which every man is best, whoever he is, and can act for the best, and live happily (*Observe that the modern ideal of training for efficiency of production in quality and quantity is not favored by the great thinker*). Happiness is activity, and the actions of the wise and the just (*not activity for production of marketable goods*) are the realization of what is noble. Not that a life of action must necessarily have a relation to other men, as some persons think, nor are those ideas only to be regarded as practical which are pursued for the sake of practical results, but much more the thoughts and contemplation which are free, independent, and complete in themselves. To man the life according to intellect is the most pleasant,—intellect constituting the special nature of man. Such a life is the most happy. The wise man, the man who rules himself, is the happiest man:

"Happiness is self-rule. Man should be educated not for business, but for leisure. It is peculiarly disgraceful to have such a poor-education as to manifest excellent qualities in work, but in the enjoyment of leisure to be no better than a slave. It is not the nature of

free men to be always seeking after the useful. Education and study should be with a view of the enjoyment of leisure. A state is not a community of living beings only (*not for the sake of business, occupation, and exchange of products*), but it is a community of equals, aiming at the best life possible. In a good harmonious education Nature, Habit, and Reason must be in harmony. Now in men Reason and Mind are the end to which nature strives, so that the education of the citizen should be with a view to that end, namely the cultivation of Reason and Mind."

THE STAMMERING PROBLEM SOLVED

BY ERNEST TOMPKINS, M. E.

THAT THE article by the Blantons entitled "What is the Problem of Stuttering" in the February, 1919, Journal of Abnormal Psychology leaves something to be desired, may be seen from the summary, which reads, " . . . there is or may be postulated some hereditary or acquired weakness in the field of emotional adaptation plus some hereditary or acquired weakness of the adaptive functions of speech, presumably in the kinesthetic, auditory or visual centers." Instead of definiteness we have in this sentence, "may be," two "somes," "presumably," and then indecision as between the "kinesthetic, auditory or visual centers." Since the authors themselves, in the same article, make a strong and worthy plea for settlement of the stammering problem, they will surely welcome a settlement.

Some one will say, "How can there be a settlement when the field is so confused?" And the question would seem reasonable in face of the glaring contradictions which are constantly appearing in the articles on the subject. The answer will be that if there can be a settlement it must be by scientific procedure, and that necessitates the establishment of a tenable theory. After we have the theory established the rest is easy. Let us take an illustration from the field of astronomy in order to convince those who, from unsatisfactory experience with fallacious theories, are accustomed to doubt all theories. When Kepler summed up all the reliable observations of the paths of planets and satellites in the conception that their paths are ellipses, he formulated a theory so comprehensive that it is accepted as the truth: we no longer call it a theory. And when some observer announces something different, we are not disturbed in our belief, for we know that Kepler's conception crystallizes the myriads of reliable observations. The new observer may be perfectly honest, but there is something wrong with his observation.

Now is there a theory in the field of stammering as reliable as Kepler's theory in the field of astronomy. Yes, there is; but it is not generally recognized because it is opposed by the same prejudice which opposed the views of Kepler, Galilei and all the other intellectual pioneers. This theory has been detailed so many times during the last

five years that it would be burdensome to give even the numerous references. The article in the Pedagogical Seminary for June, 1916, gives a comprehensive idea of it. Since the many expositions of it in the medical and scientific press stand undisputed, and since it accounts for all the manifold and perplexing manifestations of the disorder, it must be accepted as a working theory, provided we are to be scientific, and that is the understanding. Let us satisfy any who would question our right to proceed. Suppose he says, "I hold to the thymus theory, or to the auditory-amnesia theory, or to the visual-asthenia theory." But none of those theories accounts for the acquisition of stammering by imitation or association, and the speech-interference theory does account for such acquisition and for all other manifestations of the disorder, so we must accept the speech-interference theory. And the same statement holds true for any other theory that has ever been propounded. So there is no choice but to proceed on the basis of the speech-interference theory.

What is the speech interference theory? It is that the stammerer impedes his speech by a misdirected, conscious effort impelled by his fright. Let the reader grasp this fact—for fact it is, and anyone can see it—that the stammerer makes his own difficulty. Of course he has the fright, or emotion, but that is the result of the humiliation caused by his impediment. How did it begin? Why, by a temporary speech-interruption, the long sought common causal factor that has upset every other theory in the field. Dr. Makuen died without knowing that common causal factor. In the origin by imitation the interruption is intentional, by association it is unintentionally imitative, by fright it is the paralysis of terror, by sickness it is weakness. Once the temporary interruption induces the misdirected conscious effort, then the unkindness of society makes the humiliation which builds up the incomprehensibly tenacious fear.

Now we have our theory, let us use it. Is stammering coincident with the beginning of speech? No. How can one interfere with his speech if he has none with which to interfere? He can not. Speech must be acquired—speech always is acquired—before stammering can begin, notwithstanding that determined contestant who altered some of his previously published histories in order to prove the contrary! (Quarterly Journal of Speech Education, October, 1918, p. 454).

Can stammering be inherited? No. If it was inherited, it would be dissipated during the fluent period of speech acquisition. For, just as impeded speech builds up the fear which continues the disorder,

so fluent speech builds up the confidence which dissipates the disorder. Of course there are the numerous "proofs" of inheritance, such as Rudolf Denhardt's, traced back so many generations that approximately 100% inheritance of stammering, or measles, could be proved; such as Makuen's, which on the face of it, by summation of the percentages of causes he gives, turns out a mathematical disproof; such as the innumerable surmises of inheritance from a few occurrences of the disorder in different generations of the same family; but what a pity it is, what a travesty it is, to present such reasoning as medical science. Excepting the political vagaries which are unsetting the world there can probably be no greater wrong to the race than to keep the healing art down to the level of mere speculation and even worse. There is no more persistent error in connection with stammering than this interminably repeated inheritance, which not only lacks foundation in observation—just as much as inheritance of measles does—but which is actually barred from existence by the very nature of the disorder.

Has the stammerer any typical characteristics other than his stammering? No. Provided he had speech to begin with, and provided the temporary interruption occurred, he would stammer, and by stammering he would increase his difficulty until he had small chance of recovery. He might be immoral, he might be neurotic, he might be a coward, he might have an enlarged thymus, he probably would have sex; but his having any or all of those things would not make him a stammerer, nor would his being a stammerer bring on him any of those things. Let those who would dispute, do so. Say, if you please that his stammering would make him a neurotic. Let us consider that statement on its merits. Society humiliates him because it finds his antics funny. The humiliation pains him, and he dreads the repetition of it. But is a dog a neurotic because bad boys tie tin cans to its tail whenever they catch it? If the boys desist from plaguing the dog it will behave normally; and if society would desist from humiliating the stammerer he would not only behave normally, but would begin to recover. Most of the girls do recover on account of the greater consideration shown them. Go to any of the stammering schools and see the light-heartedness of those pupils whose quickly acquired fluency has convinced them that they are free from their affliction. Do they act neurotic? Not by any means. They almost walk on air. The long and short of it is that the charges against the stammerer of innumerable deficiencies are as baseless as they are cruel. He has a complicated, self-intensifying habit of extreme tenacity after

it has run for a time. And he is kept in the habit by the cruelty of society and by commercialism and faulty observation, both of which latter combine to hide the habit nature of the disorder and to represent it as a disease.

What is the solution? Extirpate the disorder by forbidding childhood indulgence in the convulsive efforts. Is that anything new? No; it is comparatively common knowledge. Otherwise there would be twice as much stammering as there is. This monumental confusion of the subject—a feature harped on as loudly as on the need of really doing something to abate it—exists only in our learned discussions of the subject. Turn to Chamber's encyclopedia of fifty years ago and you may therein read a better discussion of stammering than can be found in any modern reference book or encyclopedia. The hands of the clock have been turned back, and the modern literature on the subject is more erroneous than it was two generations ago. You find in that discussion that stammering is classified as a habit and the word habit is underscored. Do you find that to-day? Pas sur vôtre vie. One more-or-less prominent authority who was disseminating a discussion of stammering which he himself pronounced the finest discussion in the English language, on having called to his attention the fact that he had frequently and inadvertently mentioned the disorder as a habit, withdrew this superior discussion and substituted for it another which held much more rigidly to the disease classification. But the biogenetic law, and Mendelism, and evolution met with the same reception; so we may conclude that not yet, nor even soon, but possibly within a couple of generations the stammerers will get the justice which has been denied them since the race became human.

NOTES

The Iowa Child Welfare Research Station

The State University of Iowa

Iowa City

The Iowa Child Welfare Research Station was established two years ago by the State Legislature as an integral part of the Graduate College of the State University for detailed and consecutive scientific investigatons of problems in the field of the development of the normal child. The purpose and methods of the Station are those of *scientific research* with the laboratories, libraries and instructional courses of the University as part of its organization and equipment.

At present the Station is prepared to give training for the doctorate in Child Psychology and in the Nutrition of the Child with unusual opportunities for scholarly men and women with their degree who wish to continue advanced research under favorable and standardized conditions.

A group of research students are now at work and appointments are offered with stipends ranging from $480.00 to $1,500, as research assistants to exceptional men and women with scientific insight, abandon and preliminary training for research work. The research assistant devotes four hours per day to some phase of research in progress in the Station and in addition may carry a schedule of courses or devote himself himself to his own problem. No teaching is required.

National Physical Education Service of the Playground and Recreation Association of America

To help establish in every school in America physical education for the health and bodily efficiency of the children is the purpose of the National Physical Education Service with its Headquarters in the Homer Building, Washington, D. C. Shocked by the revelation of the national tendency toward physical degeneration shown in the draft examinations and the surveys of school children, a National Committee appointed by the United States Bureau of Education has secured the establishment of this Service by the Playground and Recreation Association of America.

That the children in the country as well as the children in the cities need this fundamental sort of education is clearly indicated by the surveys showing physical deficiency as prevalent among the children of rural districts as it is also among the children of the crowded cities. The most effective mental and moral training will not go far toward the making of all-round American citizens unless

adequate provision is made for the health and bodily efficiency of the boys and girls.

The thirteen states which have more or less effective laws requiring physical education in all the schools are as follows:—California, Delaware, Illinois, Maine, Maryland, Michigan, Nevada, New Jersey, New York, Oregon, Rhode Island, Utah, Washington. Bills H. R. 7 and S. 1017, now pending before Congress, plan to distribute to the states for the promotion of physical education twenty million dollars; this money to be distributed on a fifty-fifty basis, each state being required to appropriate an amount equal to the Federal funds received.

It is expected that all the State Legislatures meeting in 1920 will consider this important matter and it is recognized that the public press will be an important factor in making clear to the people the urgency of prompt and effective action to conserve and develop the physical fitness of the school children.

The National Physical Education Service stands ready to assist by furnishing information regarding the programs operating under existing laws in the various states and by making available every possible sort of helpful information.

National Research Council

A special committee of the National Research Council, consisting of Dr. R. M. Yerkes, chairman, and Dr. M. E. Haggerty of the University of Minnesota, Dr. L. M. Terman of Stanford University, Dr. E. L. Thorndike of Teachers College, Columbia University, and Dr. G. M. Whipple of the University of Michigan, with financal support from the General Education Board, have formulated a plan for using the army mental tests in schools. Such intelligence tests have been used in schools for some time on individual children, but the new plan provides for handling them in groups, even whole class-rooms at a time. The committee selected about twenty tests for careful trial. This trial was made on five thousand children. As a result the committee has now been able to select from the tests two series which seem to be the most satisfactory and these will now be tried on several thousand more children in order that they may be further perfected before they are finally offered to the teachers of the country for general use.

This carfully worked out program for group tests will make it possible and practicable to make wholesale surveys of schools annually, or even semi-annually, so that grade classification and individual educational treatment can be adjusted with desirable frequency. It is expected that the methods will be ready to be published for general use early in 1920. The army tests on which these new group tests for children are based and which were used with striking success and advantage during the war, were originally devised by a group of psychologists working under the auspices of the National Research Council.

REVIEWS

EXPERIMENTS IN PSYCHICAL SCIENCE. W. J. Crawford, D. Sc. Lecturer in Mechanical Engineering, Municipal Technical Institute, Belfast, and Queen's University, Belfast. E. P. Dutton & Co., New York, 1919. Pp. 201.

In experimental science one does not undertake to accept or deny the results which an investigator has arrived at unless either he has repeated the experiments reported and finds that his own observations confirm or contradict them, or on examination of the report discovers errors of method or fallacies in the conclusions arrived at from the reported data. In the latter alternative he says "not proven," in default of the former simply that he doesn't know.

In the instance of the experiments undertaken by the author of the book under review, the alleged psychical, or rather really physical phenomena are of such a peculiar nature, so contradictory of the accepted physical laws of nature and so dependent for their investigation upon obtaining suitable subjects who manifest them that it is not open to every one to attempt to repeat them. Indeed not only the phenomena themselves, but the conditions under which they were observed and the experiments conducted were in the most important respects peculiar to the subject or so called medium. It would be very difficult, if not impossible, to find other subjects manifesting identical phenomena, under identical conditions, and permitting similar methods of experimentation. It is therefore incumbent on Mr. Crawford, if he wishes his investigations to be recognized and the results of his experiments to be considered seriously, to submit his medium to the independent investigation of other capable observers trained in scientific methods. If for any reason, no matter what, this is impossible, then it is impossible to accept or confirm Mr. Crawford's work.

It will be said that many mediums exhibit similar "material" or physical phenomena, such as levitation of tables. They do, but not under similar conditions, and even if so, if it should turn out that other results and other conclusions were arrived at, then it could be still maintained that these conclusions were not applicable to the phenomena manifested by Mr. Crawford's medium and we should be no "for'a'der."

In lieu, then, of any opportunity to repeat Mr. Crawford's experiments we are obliged to fall back upon an analysis of his methods and processes of reasoning as given in his report.

It may be said at the outset that it is not surprising that this book has already made a strong impression on even most skeptical unbelievers. It is bound, I think, to attract wide attention and for a time at least to impress, so far as his experimental results are concerned, many interested in spiritistic and psychical matters. By those who have the "will to believe" the veridity of the author's observations and his conclusions will probably be accepted as final. By those

who have the "will to disbelieve" they will probably be rejected as fantasy run mad. At any rate the present, when all the world is agog over spiritualistic hypotheses and "super-normal" phenomena, is a most opportune time for the favorable reception of the book. The fact that Mr. Crawford is a mechanical engineer by profession and a lecturer in mechanical engineering in the Municipal Technical Institute and also in Queen's University, Belfast, attests his training in laboratory methods and his fitness for technical physical research. The experiments he reports are largely of this nature. The phenomena are physical, although linked up with spiritistic and psychical concepts and beliefs. The final explanation is physical although requiring concepts of a new form of "matter" and "force" unknown to science, and requiring the cooperation of mysterious "spiritistic" "invisible operators" who take part in the experiments and aid the experimenter and of "sitters" who contribute "psychical energy." In these days, when matter has disappeared as such under the progressive analyses of science and has been reduced to electrons, or foci of negative and positive electricity and fields of "energy," the receptive mind is prepared for new mysterious forces capable of turning topsy-turvy the world and the physical laws which govern it—as we know them.

The book is very well written and up to a certain point is a model of scientific exposition—that is of the data and experiments such as they are. It holds the attention throughout and tends to carry the reader along step by step with apparently satisfying proof, until the final "analysis of results" of the experiments on levitation without contact and conclusions, are reached. At this point, if the reader is of the type of mind of the reviewer, he asks himself "who is crazy? Somebody is crazy. Is it myself or somebody else?" I venture to say, from comments I have heard from other readers, that it takes some time, after reading, to regain one's mental equilibrium.

The greater part of the book deals with experiments on levitation without contact and to a consideration of these we shall be obliged to limit ourselves here.

These experiments deal with phenomena produced at a home-circle at Belfast in 1916-1917 and are a continuation of previous experiments already published in an earlier volume, "The Reality of Psychic Phenomena." "The circle referred to as the Goligher Circle consists of Miss Kathleen Goligher (the medium), her three sisters, brother, father, and father-in-law." Besides "spirit" raps, the chief phenomena consist of levitation and other movements and resistances of a small table thus described:

> "The little table is standing on the floor within the circle formed by the sitters and is not in contact with any of them or with any portion of their clothing. Suddenly the table gives a lurch or moves slightly along the floor. After a while it may rise into the air on two legs (two legs being thus in the air and two on the floor). These movements—which are executed, as I have said, without physical contact with the medium

or the members of the circle—are the preliminary motions which usually take place just previous to the first levitation, i. e., before the table rises completely into the air of itself where it remains suspended for several minutes without visible support.

"I have seen hundreds of levitations under all conditions; standard levitations such as that mentioned above, abnormal levitations (such as where a stool rose four feet into the air and moved gently up and down for several minutes while we all examined it closely and while the medium was seated on a weighing machine) and freak levitations (such as where the table, being levitated, rocked in the air just like a small boat tossed about on a choppy sea). I have seen the table turn completely round in the air, and I have seen it levitated upside down and sideways. . . . although a heavy man sits upon the table it moves about the floor with great ease; or the table being levitated, a strong man pushing from the top cannot depress it to the floor; or the table moves to the side of the circle farthest from the medium and an experimenter is asked to lay hold of it and try to prevent its return to the centre, but he is totally unable to do so; or the table's weight can be temporarily so much increased that it cannot be lifted, or on the other hand so much reduced that it can be raised by an upward force of an ounce or two; or the table being turned upside down on the floor cannot be raised by a strong upward pull on the legs, being apparently fastened to the floor."

As just said the six members and the medium, clasping each others hands in chain order, sit in a circle about five feet in diameter. As the length of the top of one table given as a sample was 22 inches, it is easy to calculate that its distance from the "circle" of sitters was only about 19 inches. Its weight was 12¼ lbs.

But the medium and her six relatives are not the only persons who take part and are essential factors in the behavior of the table. There is also a group of "invisible operators" who play an important role. Indeed we are asked to "remember that the members of the circle . . . are only passive instruments in the hands of" these mystic individuals—"whoever the latter may be." How these spirits—if they are spirits—operate I will mention later.

The room is dimly lighted (p. 153) by a red light. (How dimly we are not told, though it would seem to be a matter of some consequence considering that in some experiments accurate observations are required).

Communication with the "invisible operators" who help carry on the experiments is held by "spirit" raps. These of themselves are not insignificant.

"Their magnitude varies in intensity from the slightest audible ticks to blows which might well be produced by a sledge-hammer, the latter really being awe-inspiring and easily heard two stories below and even outside the house. The loud blows perceptible shake the floor and chairs."

By such raps these operators convey considerable information regarding the mechanisms by which the phenomena are produced—believe it or not as you please.

At this point it is right to state that the author in the previous volume above mentioned has dealt with the reality of these psychic phenomena and has satisfied himself not only of their veridity, but of the actuality of his friends the "invisible operators." He therefore in the present volume quite logically assumes that this aspect of the problem has been proved and there is no longer need of eliminating or testing for conscious or unconscious fraud on the part of the medium or the six sitters, or of the invisible operators. It is only fair to bear this conviction in mind in reading his fascinating exposition.

Now what is the author's hypothesis regarding the mechanism by which the levitation is accomplished? By the invisible operators boldly grasping the table and manipulating it, like an invisible juggler? Not at all. Nothing so commonplace as that. He conceives of a "psychic" rod, sometimes several rods, projected from the body of the medium—sometimes (apparently) from the stomach, sometimes from the ankles according to the exigencies of the phenomena. The operators testify to the existence of these rods and actually describe their size and shape. When, for instance, the table is levitated in the normal way the psychic rod projecting from the stomach acts as a cantilever, that is a rod which has a fixed end or support in the body of the medium and a free end which is applied to the table. The rod is rigid. It is a form of matter. It has weight. (Mr. Crawford has actually weighed it and found it may weigh as much as 50 lbs!) And yet it is impalpable and invisible. You can pass your hand through and across it and feel nothing. It is matter which is "driven out of the medium's body." "The method by which it is expelled is a mystery" but, apparently, the operators extract it. Here, then, is a form of matter with which, as Mr. Crawford frankly states, science is unacquainted.

The rapping rods are somewhat different in form and size—at least so the invisible ones say. They too issue from and are fixed to the body, but are semi-flexible and considerably smaller than the cantilever, being about 2 inches in diameter. The invisibles, presumably grasping the rod, strike the floor or table with it, producing light little taps or ponderous sledge-hammer blows. Queer kind of matter this that is projected and so manipulated!

It is obvious that if a rigid bar were firmly fixed by one end in the medium's body and if a weight were applied to the other free end of the bar, the weight of the medium's body would be *increased* by the amount of the added weight.

If on the other hand, the rigid bar were bent upwards at approximately a right angle at about the middle or near the end, and at the bend it rested upon the floor, or upon a spring pressing upwards, the increased weight would be taken up by the resisting floor, or spring, and, in the latter case, the medium's body would *decrease* if the upward pressure of the spring were greater than that of the

added weight. Furthermore, if in the first case, that of a true cantilever, the added weight were of a certain magnitude, it would cause the medium to topple over forwards. In the second case no such effect would be produced.

Accordingly, to test the hypothesis, the medium was placed upon a weighing scale and it was found that in certain instances when light weights or pressures were applied to the table the medium's weight *increased,* in accordance with the cantilever theory; and, in certain cases when excessive weights were added the medium's weight *decreased.* (When the weight of the medium proportionately increased and the added weight reached a certain magnitude, the medium tended to topple over. When the medium's weight decreased no such disturbance of equilibrium occurred). All this was fully explained by the operators who said (after the idea had been naively suggested to them by Mr. Crawford, p. 34), that when light weights or pressures were applied to the table they used the bar as a cantilever, but when the weights were excessive they allowed the bar to rest upon the floor.

Various other experiments were made, which would carry us too far to go into, to test the cantilever theory. The results were found to accord with the principles of mechanics. All or much, happened *as if* the cantilever and rod hypotheses were true, and, it may be added, as if the statements of the "invisible operators" were true. The provisional hypotheses are therefore believed to have been proved.

The way in which the operators made use of the bar is not clear. They seem to be able to handle the psychic cantilever or bar as they please, place it where they like, and, apparently, I judge, change its shape, although this is not definitely stated, change the place of exit from the body, and project two bars or more. But it is the sitters who supply the "psychic energy," though it is not evident what this does, or who or what does what. The medium simply supplies the psychic substance or bar, which is extracted from her body. Who manipulates the bar after it is projected, also, is not clear. One is justified in assuming either that the invisible operators handle the bar (as they do the rapping-bar) and with it make the table perform these antics; or else that the sitters, by means of their psychic energy, act upon the bar and do the same. It is not clear why the invisible operators, if they can do this, should make use of such a complicated mechanism and not "go to it" and raise the table themselves. If they can handle the bar, why cannot they handle the table? Perhaps it will be said that they cannot influence ordinary matter like the table but can only do it through the intermediary of this new psychic substance. But almost all "invisibles" who do materializations claim they can. There is no record of questions put to the operators in regard to this point.

When we come to examine the actual data derived from the experiments we find them really very meagre. We have certain alterations in the weight of the medium and certain topplings over and other movements of her body, and we have certain evidences of pressure applied to the floor and in other experiments

certain resistances of the medium to pressure. This is about all. The cantilever and "strutt" hypotheses (the latter conceiving of a bent bar resting on and gripping the floor at the angle) are based for their proof on these data, and little more.

In all these experiences the experimenter is the sole responsible recorder. A very serious weakness therefore results from the fact that there were no other control experts to check up the observations of the experimenter, both in reading the scales in the dim red light and in observing the positions and movements of the medium and sitters. In scientific observations, to eliminate the errors of the personal equation, sometimes several independent observers are employed. Surely, in recording such extraordinary phenomena as are here reported, it is not asking too much that control observers should be employed.

As to the reasoning process by which the conclusions are reached, it all happens *as if* the hypotheses were true. Therefore they are proved. A skeptical critic may answer that all happens, also, as if other hypotheses were true: for example, as if all were due to unconscious fraud (many curious things, to say the least were noted, e. g., when a screen was placed between the table and the medium, or when the latter's back was turned to the table nothing happened!); or as if the data were obtained through errors of observation; or, if you believe in the "invisible operators," as Mr. Crawford does, as if all the phenomena, including the variations in the weighing scales, were produced by them by just ordinary lifting and pushing the table and medium with their hands, without taking matter from a poor medium's body.

The author's hypothesis, also, surely fails to account for much and cannot be reconciled with what is scientifically known as matter, or force, or electricity, or energy. It does not explain how practically anything is done and assumes the actuality of invisible persons or co-experimenters, which is going it strong. I am not concerned with the verdity of the levitation and other phenomena, but only with the author's extravagant hypothesis to explain those assumed to be true. I do not wish to be understood as offering anyone of these interpretations, but only that the data are too meager and too insufficiently attested to warrant so extravagant an hypothesis as has been advanced. Unfortunately Mr. Crawford's exposition of his experiments is marred by an intense "will to believe," which crops up all through the book. With so dominating a will it is to be feared that control observers are essential for acceptance of even the observations.

I have already said that Mr. Crawford assumes the veridity of the phenomena and therefore the lack of need of precaution against unconscious fraud. From his point of view he is probably justified in his method of experimenting. But it cannot be expected that this assumption will be accepted by an outsider as valid. Every one admits that even when bona fide phenomena are produced by a given medium, on certain occasions fradulent phenomena of the same kind will be manifested. Therefore, in light of this universal experience, the scientific experi-

menter must insist that in every experiment the possibility of fraud shall be guarded against and eliminated.

The reviewer has entered into this lengthy and serious analysis and discussion of the more important experiments and conclusions because of Mr. Crawford's official position as a mechanical engineer and because of the earnest and systematic laboratory methods employed. If the work carried out by him had been reported by a less well trained experimenter we should have passed the book by with a brief notice.

MORTON PRINCE.

MODERN PSYCHICAL PHENOMENA, RECENT RESEARCHES AND SPECULATIONS. Hereward Carrington. New York, Dodd, Mead and Co., 1919. Pp. xi, 331. Price $2.50.

In this book Mr. Carrington gives us, not so much the results of his own extensive adventurings in the occult, as a survey of the field of the psychical in general. He does include one curious and interesting paper describing personal experiments in the physiology of crystal vision. And in certain other papers he presents his views on such diverse subjects as the nature and destiny of personality, the problem of evil, psychic healing, and the psychology of "Alice in Wonderland." But his chief purpose evidently is to impress upon his readers the magnitude and complexity of the area attacked by investigators of the seemingly supernormal since the founding of the Society for Psychical Research. Our old friend the poltergeist is missing from his pages, he omits discussion of dowsing, and, perhaps because he has dealt with it abundantly in previous volumes, he makes little mention of automatism. Also he says nothing of the latest type of ghost, the panic-creating elemental. Yet his survey is complete enough. Any who wish an up-to-date handbook of the marvelous cannot do better than procure Mr. Carrington's present work.

In detail, and often in the words of the observers, he describes such eerie beings and uncanny occurrences as invisible ghosts that let themselves be photographed, the photographing of thoughts and even dreams, the production of astral bodies, ghosts that creep into sealed scientific instruments to set them in motion, horses that spell and calculate, and evil spirits that attack the neurotic to produce dissociation and insanity. Devotees of spiritism will here have a rare treat, particularly as the phenomena described are presented by one a little more than inclined to accept their supernormal origin. "A number of striking experiments seem to indicate, in the clearest manner possible, that, in addition to our physical body, we possess another body of the same shape, composed of a sort of etheric or semi-fluidic substance." "Whatever the interpretation of the facts, the conclusion to be drawn from this mass of evidence is that genuine supernormal photographs have been taken, and that thought-forms have apparently been obtained, as well as so-called 'spirit photographs.'" "There is much

actual evidence that, in some cases at least, genuine 'obsession' of the spiritualist's variety is a fact."

Of course, to statements such as these, as to the narratives of astral action, spirit photography, and so forth, the trained worker in psychology normal or abnormal will react very differently from the spiritistic enthusiast. "Rubbish," "nonsense," and "preposterous," are words that may surge spontaneously up in his mind. He may reflect, too, on the ease with which judgment is led astray under the influence of "the will to believe." But Mr. Carrington can retort—as indeed he does retort—that there is such a thing as a will to disbelieve. In the words of the lamented William James, "we all live on an inclined plane of credulity, and let him whose plane tips neither in one direction nor the other be the one to cast the first stone." The fact of the matter is that, altogether apart from the central problem of spirit survival, it may very well be that even the most bizarre of the phenomena described by Mr. Carrington may throw new and practically important light on mental processes and powers.

Certainly psychology already owes much to psychical research—though perhaps not so much as Mr. Carrington would insist—for its present understanding of the subconscious and its present ability to explore subconscious mental states for medical and other purposes. (Take, for example, the use of the crystal for the study of hystericals, first applied by Janet, who got it from the psychical delver Myers, who got it from his co-worker in the psychical, Miss Goodrich-Freer.) And it is not reasonable to suppose that larger knowledge does not remain to be gained. The astonishing discoveries of the past few years go to justify the opposite supposition that we are only now beginning really to understand mental mechanisms and capabilities. Conceivably, then, the strange happenings of which Mr. Carrington writes afford means of approach to larger knowledge. Only investigation and experiment can determine this, and psychology may well join hands with psychical research in a systematic probing. The seeming impossibility of the alleged facts should be no sufficient bar to inquiry. There was a time when meteors were accounted merely alleged facts and absolute impossibilities. So far as that goes, there still are sundry educated folk who question the actuality of the subconscious.

In other words, Mr. Carrington's curious contribution to the literature of psychical research—a contribution written with felicity as with facility—should not be dismissed as a bringing together of imaginings and incredibilities. It is not a mocking of the intelligence but a challenge to the good faith of science. Shoulder shrugging will get us nowhere, never has gotten us anywhere. And the present writer for one hopes that science will earnestly apply its resources to ascertain the true significance of that at which many men now exclaim in wonder, while many contemptuously ignore or sarcastically deride.

H. Addington Bruce.

PSYCHOLOGY FROM THE STANDPOINT OF A BEHAVIORIST. By John B. Watson, Professor of Psychology, The Johns Hopkins University. Philadelphia and London, J. B. Lippincott Company, 1919. Pp. xiii, 429; figs. 66. Price—.

This volume is an interesting and valuable treatise on social or applied physiology, and as such serves to be taken weightily in all but its name. It is no more psychology than a knowledge of the construction of tracks, draws, locomotives, and car trucks and their action is the science of railroading ample to solve the present important railways problem; no more psychology than a description of the apparatus and its action in Harvard's observatories is astronomy. "The science of physiology deals with part reactions * * * whereas psychology deals with the adjustments of the organism as a whole" says Professor Watson (p. 193), but fortunately the world-meanings of important concepts are not so easily nullified and changed even by the recognized pioneer of behaviorism in the Johns Hopkins chair. One might think we should be grateful (although somehow we are not *very* grateful) that, as the author says in his preface, he has "retained such terms as thinking and memory," although "carefully redefined"; and he seems almost to apologise for retaining "attention" plainly one of the most somatic of psychologic terms. And when Doctor Watson maintains that it is neither, as Titchener said, a revolt in psychology nor, as Miss Washburn terms it, a revival of objectivism, we are inclined to agree with him, feeling strongly that it is only an attempt to embezzle a perfectly definite and respectable science known as physiology, scratch off some of its privileges of alluring paint and polish and to sell it to the unsuspicious as psychology—and certainly, despite Old H. C. L., at a considerable advance in the 1914 price. As an ex-physiologist the present reviewer congratulates the author on his splendid effort to show the physiologists the road to a physiology well worth their thought (pace tua!) and their time—"the continuous adjustment of internal relations to external relations" in the material range.

The contents of the book, as indicated by the eleven chapter-headings, are as follows: "Problems and scope of psychology. Psychological methods. The receptors and their stimuli. Neuro-physiological basis of action. The organs of response: muscles and glands. Hereditary modes of response: emotions. Hereditary modes of response: instincts. The genesis and retention of explicit bodily habits. The genesis and retention of explicit and implicit language habits. The organism at work. Personality and its disturbance."

This pioneer writer of modern materialism is thus seen to have discussed in the present volume a number of topics, and discussed them well, that are as meat and drink to a progressive psychology, properly so called. Chapters III, IV, and V consist of the familiar material, in cut and in letter-press, to be found in many places, psychologic as well as physiologic. But chapters VI and VII, (emotions and instincts respectively) have a new atmosphere about them, mostly because of their new research material of the genetic kind. Watson's definition of emotion shows the cool ignoring of mental processes wholly characteristic of

the book. "An emotion is an hereditary 'pattern-reaction" involving profound changes of the bodily mechanism as a whole, but particularly of the visceral and glandular systems." A scientific plan that could thus deliberately ignore the affect of emotions could with seemingly good conscience put on the screen a "movie" of the Fifth Symphony as played by a large orchestra on a brightly lighted stage, or of the lovely personality of a happy three-year-old; he might even expect to show us, did we sit in front, his own behavior as he wrote this book, expecting us to imagine all the rest! And yet the book itself belies any such implication of physiology, for it contains evidences of both thought and feeling, and of well-planned work.

As some might expect, the chapter on instinct is all that might be asked. It is a fundamental treatment of this topic. He thinks (pace!) that most of the asserted instincts are really consolidations of instinct and of habit—an easily-accepted opinion.

Chapter IX, on language-habits, is perhaps the best discussion of the body-side of conceptualization recently published. The suggestions for language-research in the future are well worth repeating, especially considering that the physiology of thought so far has had much less than its useful share of study. Watson says that the following points would be of special interest to psychologists: The acquisition of language in blind deaf mutes; the symbolic and folk lore side of our own and of other languages; stuttering, etc.; the effect of central lesions on language-mechanisms; the speech of psychopathic individuals, maniacs, paretics, paranoiacs for examples, slang and profanity in relation to emotion; and the language-system in dreaming by day and by night.

Chapter X, giving us much interesting matter, some of it new, on the organism at work, discusses fatigue, the work-curves, drug-effects, climatic relations, sexual differentiation, habit-acquisition factors, the conditions of learning, and so forth.

The eleventh chapter sets forth the behavioristic notion of personality—the reaction-mass made up chiefly of habit-systems, instincts, and emotions. Watson pays his skeptical respects to various familiar ways of judging personality—voice, attitudes, gesture, gait, phrenology, portraits, biological, characteristics, handwriting (Baldo, Binet, Crépieux-Jamin, Downey, Hall and Montgomery). He is inclined to believe that even the disease of a personality may arise from habit-distortion, (beyond the reach of compensatory factors) starting often in infancy as indulgence by care-takers.

The illustrations are adequate and some of them original. The book is written in a clear style and is well printed and bound. The index is adequate, but a table of contents would add to the usefulness of the volume.

As a text-book for some college course requiring in addition a text-book of real psychology, the work has a place, as it has interest abundant for the physiologist and the neurologist. To employ it in lieu of a treatise on the mental process, however, (were any institution so rash) would be to deprive the student

of part of his birthright, for it ignores the only part of the personality in which the average individual has much interest, namely, himself as a sentient being.

GEORGE VAN NESS DEARBORN.

DIAGNOSTIC SYMPTOMS OF NERVOUS DISEASES. By Edward Livingston Hunt, M. D., Assistant Professor of Clinical Neurology, College of Physicians and Surgeons, New York, etc., etc. Philadelphia and London, W. B. Saunders Company, Second Edition, revised, 1917. Pp. 292; figs., 64.

"My students at Columbia," starts the preface, "have asked me for several years to name a book in which they could find the salient points and leading symptoms of the principal nervous disease without the laborious search involved in consulting the larger text books. This book, written to supply such a demand, is intended for the student, the intern, and general practitioner, both as a reference and as an aid to diagnosis." With all due credit to the theoretic pedagogues who would make of all men forthwith profoundly learned *savants*, the present reviewer believes that ther is a proper important use for such books, just as there is for medical quiz compends: they serve to refresh and to systematize conceptually many a busy man's knowledge of a topic, or even of a subject, which otherwise would never be either systematized or refreshed. Such books seem not only expedient but pedagogically sanctioned.

Few of them are as good as Livingston Hunt's, for he knows how to teach, as many Medical Corps men who had the courses conducted at the Neurological Institute, at the P. and S., and all about town, in the summer of 1918 could gladly testify. His clinics on the Islands were a delight.

The wide range and usefulness of the volume are indicated sufficiently by the seventeen chapter-titles, which are as follows: "The examination of a nervous case" (including the "Outlines for Clinical Examination," copyrighted, curiously enough, by the Department of Neurology, Columbia University). Deformities, Paralysis, Tremors, Trophic disorders, Spinal localization, Gaits, Ataxia, Convulsions, Sensation, Reflexes, Vertigo, the Eye, Disturbance of speech, Aphasia, Cerebro-spinal fluid, Electric reactions, and the Index.

As an illustration of the author's mode of treatment of most of these topics we may cite the gist of his valuable chapter on gaits. As he says, "not only is the gait a leading symptom of diseases of the spinal cord, but it also occurs with affections of the brain and even functional conditions. The student will find that he is amply repaid for the time he devotes to this subject." (And what the "student" in the narrowest sense finds valuable the usually older student of neuropsychiatry is certain to find of use whether in his self-sufficiency he thinks so or not; the wise man of course, is a student ever.) Our author describes ten gaits besides the normal: the ataxic, the hemiplegic, the steppage, the spastic, the clumsy, the cerebellar, festination, the staggering, the gait of hysteric conditions, and that of arteriorclerosis. It is poor objection to such an assorting to say that they merge and combine indefinitely into each other,—for so do

most scientific classes; yet science must have concepts; veritatis simplex oratio est non. Twenty-two pages are devoted to gaits, each of the latter being described and the discussion made immediately of use in many cases by a list of the chief diseases showing it. For the medical student and the less experienced practitioner these are of great diagnostic use.

This book provides much of the skeleton on which much neurologic diagnosis may be vitalized. To many a man who thinks himself far beyond or even "above" it, it would be of far more value than the most expensive set of textbooks in print; and its own price is small. The illustrations, nearly all of which are original, are excellent both graphically and educationally. Professor Livingston Hunt's little book should be known even more widely than it is.

GEORGE VAN NESS DEARBORN.

Boston City Hospital.

RELIGION AND SEX. STUDIES IN THE PATHOLOGY OF RELIGIOUS DEVELOPMENT. By Chapman Cohen. London, T. N. Foulis, 1919. 287 pp. Price 6s.

Evidently this book was largely a reaction to: James' "Varieties of Religious Experiences," which is characterized as a "remarkable piece of religious yellow journalism * * * a glorified revival meeting in an expensive volume."

The author modestly affirms that his book "does not claim to be more than an outline of the subject, a sketch-map of a territory that others may fill in more completely." He does not write as a pathologist nor as a psychologist. On the contrary he assumes the role of a historian of pathologic religious symptoms. These are not treated from the viewpoint of case-studies of individual humans, but from groups as these are organized into larger social movements. From the professional point of view it is not a controversial book, for it deals almost entirely with conditions that are admittedly pathological. The book is almost void of the discomforting discussion of the more normal and borderland religious manifestations. The author is content to prove that religious institutions and thought, and religious valuations, have been and are largely dominated by these pathologic states which he sets forth and which modern thought generally separates from normal religion.

It will be comforting to many to be assured at the outset that the object of his inquiry excludes the wider and perhaps more difficult field of the possible erotogenetic interpretation of all religions. Still others will be glad to be reassured that this volume gives no hint of any acquaintance with psychoanalysis. Again, while disclaiming any investigation of erotism in the philogenetics of religion the author makes investigation unnecessary by the dogmatic assurance that: "Neither sexuality, no matter how powerful nor how diseased, no matter how pronounced, can account for the religious idea. That has an entirely separate and independent origin." Being entirely innocent of any Freudian taint the author can add: "This should be plain to any one who has but

a merely casual acquaintance with the history of religion." These facts also tend to recommend the book to many timid readers.

In such spirit we get a hurried review of anthropologic literature and some impressionistic sweep over phallic worship. But the main emphasis is placed upon the erotisms and pathology of heretical sects, monastic institutions, asceticism, the crusades and witchcraft, with a lesser emphasis than usual upon the erotism manifested in the lives of the "saints."

If Mr. Cohen is a determinist it is with "limited liability" for he obviously is very moralistic, but irreligiously moralistic. This is shown when he holds Christian ideas responsible for the evils associated with Christianity, rather than to charge them up to the underlying impulses which made those creedal intellectualizations acceptable and gave them their great potency. Those qualities of the book which I esteem its weakness will be its strength with that part of the public for whom the book was designed. It is moderate in tone, evinces a wide reading, is free from such technical discussions as are suggested by its sub-title and is relatively conservative in its conclusions. From this viewpoint it should be counted among the more efficient items of anti-Christian literature.

The author is a Freethought propagandist who is widely known in Great Britain. From that viewpoint this book marks a departure from the former literature coming from the same general source. Hitherto the attacks upon Christianity have dealt with the accuracy of its teachings, the historicity of its founder and the ethical value of its moral creeds. In terms of pathology, this book attempts to explain the potency of Christianity, independently of its verity or divinity. More of that type of discussion is needed because it is always more illuminating.

THEODORE SCHROEDER.